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September 27, 2018

Ms. Sarah Rolfes
Remedial Project Manager
United States Environmental Protection Agency
77 Jackson Blvd.
Chicago, IL 60604

RE: Response to Comments and Transmittal of the Site-Specific Work Plan, Addendum No. 1, Revision 2
North Station Operable Unit 1, North Branch Site
Chicago, Illinois
The Peoples Gas Light and Coke Company
CERCLA Docket No. V-W-08-C-917
CERCLIS ID – ILD982074775

Dear Ms. Rolfes:

The Peoples Gas Light and Coke Company (PGL) is providing this letter response to the United States Environmental Protection Agency (USEPA) comments received on August 14, 2018, on the Site-Specific Work Plan Revision 1 (SSWP) Addendum No. 1, Revision 1, submitted to USEPA on June 15, 2018, for The PGL Former Manufactured Gas Plant (MGP) North Station Operable Unit 1 (OU1) of the North Branch Site.

For ease of review, USEPA comments are presented below in italics, followed by PGL's responses. A SSWP Addendum No. 1, Revision 2, revised to address the USEPA comments, is enclosed.

Comments

1. *Per our recent discussions, please revise the Work Plan to indicate that it is for the upland portion (OU 1) of the Site. In the future, please make sure to indicate which portions of the Site are being addressed in the associated Work Plans and Reports.*

PGL Response: The enclosed SSWP Addendum No. 1, Revision 2 has been updated to reference OU1 and future North Station work plans and reports will reference the applicable North Station OU.

2. *SSWP Addendum 1 included to soil borings on the south side of West Hobbie Street (NOS-SB115 and NOS-SB117) that are not included in SSWP Addendum 1, Revision 1. EPA had previously recommended that an additional boring be installed west of NOS-SG14. This comment still applies to SSWP Addendum 1, Revision 1. The SSWP Addendum 1., Revision 1 indicates "Following a review of data from NOS-MWP106, it is proposed to install one soil gas probe (NOS-SG21), south of West Hobbie Street and to collect a minimum of two rounds of samples to assess potential risk to receptors to the south from MGP-affected soil observed in this area. In addition, soil gas samples will be collected from existing soil gas probes NOS-SG14 and NOS-SG15 when samples are collected from NOS-SG21. Building design*

and use south of West Hobbie Street will also be evaluated and discussed in a forthcoming Revision 1 of the RI Report." The proposed reliance on soil gas results will not address the characterization of subsurface impacts at depth to the south side of West Hobbie Street. EPA suggests that the soil boring locations in the SSWP Addendum 1 discussed above (NOS-SB115 and NOS-SB117), and the suggested additional boring west of NOS-SG14, be considered for inclusion in SSWP Addendum 1 Revision 1.

PGL Response: PGL understands the reference to boring location NOS-SB115 in USEPA Comment #2 was a typographical error and that the intended location to be referenced was NOS-SB116, which was south of Hobbie Street. NOS-SB115 is located in the southeast portion of the ComEd parcels, and is included with the previous and current revision of the work plan.

As discussed with USEPA on September 28, 2018, PGL will include two proposed borings south of West Hobbie Street to laterally delineate MGP residuals. The two proposed locations are described as follows:

- NOS-SB116, which was included in the first revision of the work plan, located in the West Hobbie Street right-of-way (ROW) and west of SG-14, will provide lateral delineation east of exceedances reported at non-delineated boring NOS-MWW/P106. Additionally, NOS-SB116 is located south of borings on the ComEd parcels where MGP residuals were observed.
- NOS-SB117, located in the West Hobbie Street ROW, will provide lateral delineation west of exceedances reported at non-delineated boring NOS-MWW/P106.

Additional details for proposed soil borings NOS-SB116 and NOS-SB117 are presented in the enclosed SSWP Addendum No. 1, Revision 2.

3. *It is noted that the SSWP Addendum 1, Revision 1 does provide an explanation for why vapor intrusion evaluation sampling will be conducted at Pump House No. 1, No. 2, and the Control Building. However, the rationale for why the other buildings are excluded is not provided. Therefore, for clarity, please list each of the properties and building present and provide a brief explanation as to why no additional VI sampling is proposed for each parcel. Additionally, please note the forthcoming new data from the supplemental drilling and sampling activities could affect the proposed vapor intrusion investigation.*

PGL Response: The SSWP Addendum No. 1, Revision 2 has been revised to include Table 4, which presents an evaluation of the buildings located on the OU1 parcels consistent with the USEPA-approved Vapor Intrusion Decision Matrix. This evaluation does not change the proposed soil gas and indoor air sampling scope, as detailed in the enclosed SSWP Addendum No. 1, Revision 2.

In addition, SSWP Addendum No. 1, Revision 2 notes "Investigation data collected during supplemental drilling and sampling activities could affect the proposed vapor intrusion investigation. The vapor intrusion matrix evaluation will be updated to include new investigation data collected and if any updates to the proposed scope are required, they will be discussed with the USEPA prior to completion".

4. *Figure 1 of the SSWP Addendum 1, Revision 1 draws the Operable Unit Boundary line to be east of (and apart from) the sewer line located within Kingsbury Street. Please revise the boundary line to extend to the West side of Kingsbury Street.*

PGL Response: Figure 1 in the enclosed SSWP Addendum No. 1, Revision 2 has been revised to identify the OU1 boundary line on the west side of the North Kingsbury Street sewer.

5. *In previous comments, EPA had recommended that monitoring wells MWW-KN, MWW-KS, MWW108, MWW109, and MWW106 be sampled if they are found to contain water during the groundwater gauging. Please provide further information regarding previous sampling events at these wells and if any additional data is needed to evaluate the groundwater to surface water interface pathway.*

PGL Response: Following a review of the *Decision Matrix for Evaluating the Groundwater to Surface Water Interface (GSI) Pathway at MGP Upland Sites* (USEPA November 2017) and North Station site data (i.e., monitoring well distribution and groundwater gauging and analytical data), PGL considers the available data adequate to evaluate the GSI pathway. The GSI evaluation will be presented in Revision 1 of the Remedial Investigation (RI) Report following the completion of the supplemental investigation.

During groundwater gauging rounds completed in September 2013, April 2014 and August 2014, groundwater was not encountered in monitoring wells MWW-KN, MWW-KS, MWW108, MWW109, MWW106 (and MWW111, located adjacent to the river). PGL no longer has access to the LaSalle Chestnut parcel, which has been enrolled in the Illinois Environmental Protection Agency Site Remediation Program, under which a No Further Remediation letter is being pursued. The existing monitoring wells that PGL has access to (including MWW-KN, MWW-KS, and MWW106) will be gauged during the proposed site wide gauging round presented in the SSWP Addendum No. 1, Revision 2. If groundwater is observed in any of these wells, groundwater samples will be collected consistent with the methods described in the enclosed SSWP Addendum No. 1, Revision 2.

If you should have any questions, please do not hesitate to contact me at (312) 240-4569 or Narendra.Prasad@WECEnergyGroup.com.

Regards,

Naren Prasad, P.E., MPH
Principal Engineer – Environmental

Enclosures: Site-Specific Work Plan Revision 1, Addendum No. 1, Revision 2 (September 27, 2018)

For distribution to: Mr. Paul Lake, IEPA (2 hard copies via US Mail and email)
Mr. David Klatt, Jacobs (via email)
Mr. Joseph Ridgway, OBG (via email)

References

Natural Resource Technology, Inc., September 26, 2016. *Site-Specific Work Plan Addendum 1, North Station Former Manufactured Gas Plant Operable Unit, North Branch Site, Chicago, Illinois*

O'Brien & Gere Engineers, Inc, June 15, 2018. Site-Specific Work Plan Addendum No. 1, Revision 1 *North Station Former Manufactured Gas Plant Operable Unit, Chicago, Illinois*

United States Environmental Protection Agency, June 27, 2016. *Response to Remedial Investigation Report, Revision 0, North Branch Site, North Station OU, Chicago, Illinois*

United States Environmental Protection Agency, November 2, 2017. GSI Decision Matrix

United States Environmental Protection Agency, August 14, 2018. *Response to SSWP Addendum 1, Revision 1, North Station Former Manufactured Gas Plant Operable Unit, Chicago, Illinois*

September 27, 2018

Mr. Naren Prasad, PE, MPH
Principal Engineer
WEC Business Services, LLC
200 E. Randolph Drive, 21st Floor
Chicago, IL 60601
(via email only)

RE: Site-Specific Work Plan Addendum No. 1, Revision 2
North Station Former Manufactured Gas Plant Operable Unit 1, Chicago, Illinois
The Peoples Gas Light and Coke Company
CERCLA Docket No. V-W-08-C-917 CERCLIS ID – ILD982074775
OBG Project No. 67862

Dear Mr. Prasad:

O'Brien & Gere Engineers, Inc. (OBG), is providing this Revision 2 to the *Site-Specific Work Plan (SSWP) Addendum No. 1* dated September 26, 2016 [Natural Resources Technology (NRT), 2016] for the North Station Former Manufactured Gas Plant (MGP) Operable Unit 1 (OU1) of the People Gas Light and Coke Company's (PGL) North Branch Site. The proposed supplemental remedial investigation (RI) activities are to address United States Environmental Protection Agency (USEPA) comments (USEPA, 2016) on the *Remedial Investigation Report, Revision 0* (RI Report) (NRT, 2015), the data gaps identified through additional analysis, USEPA comments on the SSWP Addendum No. 1, Revision 1 dated August 14, 2018 and discussions with the USEPA on September 26, 2018. The approach, which has been discussed with the USEPA in project status meetings, is described below.

CURRENT DATA GAPS

Several USEPA comments on the RI Report (NRT, 2015) regarding data gaps are addressed in this *Site-Specific Work Plan Addendum No. 1, Revision 2* (SSWP Addendum 1, Rev. 2). Updated figures and tables will be included in the RI Report Revision 1 following the completion of the proposed supplemental investigation activities.

HYGIENEERING, INC. DATA REVIEW

The USEPA indicated additional data that was received, prepared by Hygieneering, Inc. (dated May 2001), should be reviewed to determine whether the information would affect the data gap analysis. Each of the 46 borings advanced in 2001 were sampled at three intervals (0 to 6 inches below ground surface [bgs], 6 to 36 inches bgs, and 3 to 10 feet bgs) for a total of 138 samples. As the analytical data collected in 2001 was not validated and only available in Portable Document Format (PDF) files, and because OBG previously performed a detailed review of the soil boring logs to identify the presence of MGP residuals, USEPA agreed that an alternative approach to data review would be acceptable. OBG performed a cursory review of the laboratory analytical reports to identify samples with elevated concentrations of MGP-related constituents. This review was conducted without generating screening tables, but rather was completed in a qualitative manner [e.g., identifying samples with elevated concentrations of polycyclic aromatic hydrocarbons (PAHs)]. The samples that were identified with elevated concentrations of PAHs were further reviewed to determine if they

were collected from areas where MGP residuals were identified. If samples were collected from areas with evidence of MGP residuals [i.e., observation of dense non-aqueous phase liquid (DNAPL)] as detailed on Figure 13 of the RI Report (NRT, 2015), they were removed from the list for further consideration, as the presence of residuals already identifies these areas for further consideration during the RI/feasibility study (FS) process.

A total of 55 discrete samples in 29 boring locations were identified during the data review that contained elevated levels of MGP-related constituents and were not co-located with observations of MGP residuals. Borings adjacent to these 29 boring locations were reviewed to determine whether the elevated concentrations were delineated laterally and vertically. Sampling locations B21, B23, B24, B30, B37, B38, and B39 were determined to be in areas where the need for further delineation has already been identified based on the vertical and lateral extent analyses described in the subsections below, so they did not warrant additional investigation on their own. The locations of these borings are highlighted on Figure 1 of this Addendum. The remaining elevated samples collected were determined to be delineated by existing borings in the vicinity. Table 1 details the results of the analysis of these samples. Based on the findings of this review, the results did not affect the overall understanding of conditions at the North Station OU. The Hygieneering report is included as Attachment A.

VERTICAL EXTENT EVALUATION

As part of past efforts to determine lateral and vertical extent of potential MGP-affected soil, over 437 samples (not including the Hygieneering, Inc. 2001 data which is included in Attachment A) have been collected throughout the North Station OU1 and from adjacent off-site areas. The locations of these 437 soil samples are presented on Figure 1. Table 2 presents the tabular form of the vertical delineation analysis that was conducted, a narrative of which follows.

Of the 437 total samples, a total of 183 samples exceeded the corresponding residential screening levels (SLs) and/or background for some combination of benzene, ethylbenzene, toluene, and total xylenes (BTEX), naphthalene, 2-methylnaphthalene, 3,3-dichlorobenzidine, dibenzofuran, total PAHs, benzo(a)pyrene Toxic Equivalent (TEQ), total polychlorinated biphenyls (PCB), PCB-1242, PCB-1248, PCB-1254, PCB-1260, total antimony, total arsenic, total copper, total iron, total manganese, total lead, total thallium, and/or total cyanide. MGP constituents of potential concern (COPCs) were below residential SLs and background values in the remaining samples, with the exception of naphthalene, which exceeded the background value in several samples, but not the residential SL. In the case of naphthalene, samples exceeding the background value, but not the residential SL, were considered a non-exceeding sample.

For 48 of the 183 samples that exceed residential SLs and/or background values, the exceedance is vertically defined by a non-exceeding or inorganic-only exceeding sample from a deeper sample interval within the same boring.

Of the remaining 135 exceeding samples, 107 are vertically delineated by a non-exceeding sample or inorganic-only exceeding sample from a deeper interval within an adjacent boring (within approximately 60 feet).

Of the remaining 28 samples, results from 16 samples do not require further investigation because they are not collocated with elevated MGP COPCs. Fifteen of those samples only had inorganic exceedances and one only had a PCB exceedance. A sample collected at SG16 from 2.0 to 2.7 feet exceeded the residential SL for PCB-1248; however, as historic records do not indicate that PCBs were used as part of MGP operations at the site, and because this exceedance is not located within the OU, additional delineation is not required.

The 12 remaining exceeding samples occur in nine soil borings on the Commonwealth Edison (ComEd) Parcel, and are exceedances related to organic constituents (specifically, benzene, ethylbenzene, benzo(a)pyrene TEQ, naphthalene, and/or total PAHs). The vertical extent of MGP-related effects is uncertain at the nine soil boring locations shown in Table 2 and depicted on Figure 1. These nine borings that are not considered vertically

delineated constitute a data gap that will be addressed through the proposed supplemental RI field work activities, described in the Proposed RI Supplemental Sampling section below.

LATERAL EXTENT EVALUATION

This evaluation incorporates findings presented in RI Report (NRT, 2015) and the subsequent USEPA comments (USEPA, 2016), which recommended that soil data be screened to understand whether additional lateral delineation is warranted, particularly for off-site considerations and in the vicinity of the former MGP-related Purifying House along North Kingsbury Street.

A review was conducted of figures from RI Report (NRT, 2015) and the forensic evaluation prepared by Exponent to determine whether any exceedances require additional lateral delineation (see Attachment B). Visual review of this information indicated three locations, NOS-MWP106, NOS-SB102, and SS05, appeared to need further delineation to the south, north and west, respectively. The lateral extent of the remaining exceedances was adequately delineated by adjacent borings.

Additional evaluation of these the locations mentioned above determined:

- A sample collected from 4 to 6 feet bgs at SS05, located on the Halsted Parcel, west of the former MGP OU, had a mixture of PAH concentrations consistent with those found in background soil in the City of Chicago, and are not consistent with PAHs associated with the MGP operations (see Attachment B). No MGP residuals or photoionization detector (PID) readings above 0 parts per million (ppm) were observed at this soil boring location (see Attachment C). It was determined no additional investigation is required in this area.
- A sample collected from 0.3 to 0.8 feet bgs at NOS-SB102, located along the northern boundary of the former MGP OU1 and the Division Parcel, had PAH, arsenic, and lead exceedances. The Division Parcel has been entered in the Illinois Environmental Protection Agency's (Illinois EPA) Site Remediation Program (SRP) and a site investigation was completed by RPS GaiaTech Incorporated (GaiaTech). Soil boring GS-4 was advanced by GaiaTech directly north of NOS-SB102. Arsenic and lead results from a sample collected from 0.5 to 2 feet bgs at GS-4 did not exceed applicable screening levels (see Table 3). This sample was not analyzed for PAHs. A sample collected from 7 to 8 feet bgs at GS-4 was analyzed for PAHs, and results did not exceed applicable screening levels, as presented on Table 3. See Attachment D for the GaiaTech Comprehensive Site Investigation Remediation Objectives Report and Remedial Action Plan (GaiaTech, 2014). A draft "No Further Remediation Letter" was issued by the Illinois EPA for the Division Parcel in May 25, 2016 (see Attachment E). Because of these results, and because the Division Parcel is being advanced through the Illinois EPA's SRP, no additional investigation is proposed to address the exceedances at NOS-SB102. This is consistent with the Memorandum of Understanding between Illinois EPA and USEPA Region 5, which states "*Region 5 does not anticipate taking any federal environmental cleanup action under RCRA (Resource Conservation and Recovery Act) or TSCA (The Toxic Substances Control Act) at a site, or portion thereof where the Illinois EPA has approved a remediation as having met the requirements of 35 Ill. Adm. Code 742*" (USEPA, 1997).
- NOS-MWP106, located south of West Hobbie Street, will be addressed through the proposed field work activities, described in the Proposed Supplemental RI Sampling section below.

VAPOR INTRUSION EVALUATION

A vapor intrusion (VI) evaluation was conducted consistent with the USEPA-approved VI Investigation Decision Matrix (Attachment F). Buildings within the North Station OU1 were evaluated for potential VI issues using the VI Decision Matrix. There are four buildings located on the ComEd Parcels and several residential dwellings on the PGL/Old Town Village West Parcels (north of the ComEd Parcels). The remaining parcels are not improved with any structures. The VI evaluation is presented on Table 4 and identified the following data gaps to be addressed as part of this supplemental investigation:

- Shallow groundwater in wells nearest to Oil Pump Houses No. 1 and No. 2 on the ComEd Parcels have elevated concentrations of MGP VI COPCs, exceeding Groundwater Vapor Intrusion Screening Levels (VISLs):
  - A sample collected from MWW115 near Oil Pump House No. 2 had concentrations of benzene at 7,080 micrograms per liter (µg/L) and naphthalene at 4,970 µg/L in groundwater.
  - A sample collected from MWW114 near Oil Pump House No. 1 had a benzene concentration of 33.7 µg/L.
- MGP source material is located in close proximity to Oil Pump House No. 1 and No. 2 as identified:
  - Oil Pump House No. 1 is located over a former MGP structure (Purifying House) and observations of sheen were made in adjacent borings B44 and B43.
  - Oil Pump House No. 2 is located over a former machine shop associated within the MGP facility and observations of DNAPL were made in adjacent borings CENS-SP35 and B34.
- Two sump headspace samples collected in 2013 and 2014 within the Control Building (Soil Gas Sample NOS-SGHS1 and NOS-SGHS2) had exceedances and are located above an historic MGP Oil Tank.

Based on these findings, installation of one sub-slab soil gas probe within both Oil Pump Houses No. 1 and No. 2 on the ComEd Parcels is warranted. Additionally, indoor air and ambient air sampling is warranted for the Control Building on the ComEd Parcels. These activities are described in the Proposed Supplemental RI Sampling section below.

In addition, ComEd provided the following information regarding the Oil Pump Houses:

- The buildings house a valving manifold and pressurizing (pumping) plant used to pressurize underground high-pressure fluid-filled (HPFF) lines.
- The buildings also contain two storage tanks described as containing approximately 5,000 gallons of dielectric fluids. The buildings also store nitrogen cylinders.
- The buildings are frequented at least once every two weeks for a few hours at a time. During emergency conditions/operations, ComEd personnel may be in the building or at the substation for 12 to 16 hour shifts for weeks or months at a time.
- The buildings contain an exhaust fan that circulates air out of the buildings for temperature control during the summer and are typically supplied with a space heater during the winter. Based on information from ComEd personnel, both buildings are constructed in essentially the same manner.

Chloroform was detected in multiple soil gas samples collected during multiple rounds of sampling at concentrations that exceed the residential and industrial SLs. However, chloroform has not been detected in groundwater, and of the 215 soil samples analyzed for chloroform, it was only detected once at a concentration of 0.11 mg/kg, which is below the residential screening level of 0.32 mg/kg. Also, it is worth noting that, other than one exceedance observed at sub-slab location NOS-SG17, all exceedances of chloroform have been observed from off-OU1 sampling locations. The risk of chloroform in soil gas will be evaluated in the revised Baseline Risk Assessment, which will be included in Revision 1 of the RI Report. However, no additional sampling is proposed because of the previously-observed chloroform exceedances.

UTILITY CORRIDOR

USEPA Specific Comment 23 on the RI Report (NRT, 2015) reiterated that groundwater from the Fill unit is potentially migrating off-site via the sewer preferential pathways. Construction drawings received from the City of Chicago after submittal of the RI Report confirm that the sewer under West Hobbie Street flows to the west and indicate that it is intercepted by the North Kingsbury Street sewer, which flows to the south. OBG proposes to complete a soil gas assessment as described in the Proposed RI Supplemental Sampling section below to evaluate whether groundwater potentially migrating offsite is a risk to off-site receptors.

PROPOSED SUPPLEMENTAL RI SAMPLING

Based on current data gaps, additional investigation is warranted to further delineate potential MGP-affected soil, groundwater, and soil vapor at the North Station OU, and to evaluate risk. These supplemental RI activities will be performed in accordance with the Multi-Site Health and Safety Plan – Revision 1 (Integrys Business Support LLC (IBS), August 2007), the site-specific information included in the *Modified Site-Specific Work Plan, Revision 1* (SSWP, Rev. 1) (NRT, 2012), and the Multi-Site Field Sampling Plan (FSP) – Revision 4 (IBS, September 2008), except where noted.

The names, rationale, and anticipated depth for each investigation activity/location are summarized in Table 5 and the location of each investigation activity is presented in Figure 1.

SOIL BORING ADVANCEMENT AND SAMPLING METHODS

Nine soil borings (NOS-SB107 through NOS-SB115) are proposed to further vertically delineate potentially affected soil on the ComEd Parcels. Two soil borings (NOS-SB116 and NOS-SB117) are proposed to further laterally delineate affected soil south of West Hobbie Street. The proposed boring locations presented in Figure 1, may be affected by subsurface utility concerns; the locations of any offsets will be determined by the field team and project managers. The soil boring installation, soil sampling methods, and analyses will be in general accordance with the SSWP, Rev. 1 (NRT, 2012). Soil borings will be advanced with a Geoprobe or hollow-stem auger drill rig. Sampling will be continuous to define the presence/absence and vertical extent of affected soil at each boring location. Soil will be classified according to SOP-SAS-05-02 Field Logging and Classification of Soil and Rocks from the Multi-Site FSP (IBS, September 2008).

A minimum of two subsurface samples will be collected from each of the proposed boring locations. One sample will be collected based on field observations of potential MGP residuals (e.g., visual observations, odors, and/or PID readings), if encountered. If no potential MGP residuals are identified, a soil sample will be collected from a discrete interval below the area of identified exceedances from co-located former borings (refer to Table 5) to more precisely delineate the vertical extent. The second sample will be collected from the bottom of the boring to fully document vertical extent at that boring location. If potential MGP residuals are identified in a boring, a third sample will be collected from the interval immediately beneath the potential MGP residuals (as indicated by visual observations, odors, and/or PID readings) to document vertical extent. The target boring depths are presented in Table 5.

Soil samples will be analyzed for the full MGP COPC list as identified in SSWP, Rev. 1 (NRT, 2012), with the exception, as stated in a letter to USEPA dated June 25, 2012, that soil samples collected from the ComEd Parcels which will not be analyzed for PCBs (see Table 5). A sampling and analysis plan summary is presented in Table 6.

With regards to advancement of soil borings, if field observations of MGP residuals are observed within the proposed borings and the residuals cannot be fully delineated using existing surrounding borings, contingency borings may be advanced to further refine delineation. Advancement of contingency borings will be mutually agreed upon by the field team and project managers prior to their advancement. Locations for contingency borings will be determined based on field observations and field conditions (e.g., presence of utilities) and are not presented in this Addendum.

SOIL VAPOR PROBE INSTALLATION AND AIR SAMPLING

ComEd Parcels

Pursuant to the VI Investigation Decision Matrix (Attachment F) an evaluation of buildings onsite was completed. RI activities completed to date and proposed next steps are presented in Table 4. Soil vapor sampling is warranted at Oil Pump Houses No. 1 and No. 2 on the ComEd Parcels (NOS-SG19 and NOS-SG20). Soil vapor

sampling has not previously occurred at these two buildings so indoor air sampling is not required at this time. A minimum of two rounds of sampling will be performed in accordance with the VI Investigation Decision Matrix (Attachment F).

Additionally, indoor air sampling is warranted at the Control Building on the ComEd Parcels. Pursuant to the VI Investigation Decision Matrix, indoor air sampling is warranted at this building due to the past sump headspace exceedances and former MGP features present at this location. Indoor sampling will be conducted at the occupied-level of the building (not the crawl space area). Additionally, an ambient air sample, NOS-AMB01, will be collected upwind of the Control Building during the time of indoor air sample collection. A minimum of two rounds of sampling will be performed in accordance with the VI Investigation Decision Matrix. The indoor, ambient, and soil gas sampling methods and analyses will be in accordance with the USEPA-approved SSWP, Rev. 1 (NRT, 2012) and as outlined in USEPA-approved SOP SAS-12-01 Indoor Air Sampling and SOP SAS-11-06 Soil Gas Sampling from the Multi-Site FSP (IBS, September 2008). OBG anticipates the use of flow-regulated summa canisters to collect the samples.

South of Hobbie Street

Following a review of data from NOS-MWW/P106, it is proposed to install one soil gas probe (NOS-SG21), south of West Hobbie Street and to collect a minimum of two rounds of samples to assess potential risk to receptors to the south from MGP-affected soil observed in this area. In addition, soil gas samples will be collected from existing soil gas probes NOS-SG14 and NOS-SG15 when samples are collected from NOS-SG21. Building design and use south of West Hobbie Street will also be evaluated and discussed in a forthcoming Revision 1 of the RI Report.

Utility Corridor

Following a review of data, and correspondence with USEPA, it was determined that soil gas collected from NOS-SG16 is adequate to assess risk to potential receptors at the downgradient end of the North Kingsbury Street Sewer. To evaluate potential risk to receptors at the upgradient end of the North Kingsbury Street Sewer, it is proposed to install one soil gas probe (NOS-SG22) upgradient of the site and collect a minimum of two rounds of samples. In addition, soil gas samples will be collected from existing soil gas probe NOS-SG16 when samples are collected from NOS-SG22.

The additional VI sampling locations are presented on Figure 1 and described in Table 5. Exact locations for this sampling will be determined based on field conditions by the field team and project managers.

Indoor air, ambient air, and soil gas samples will be analyzed for the full MGP COPC list for soil gas as identified in SSWP, Rev. 1 (NRT, 2012). In addition, oxygen, carbon dioxide, and methane will also be analyzed. A sampling and analysis plan summary is presented in Table 6.

Investigation data collected during supplemental drilling and sampling activities could affect the proposed vapor intrusion investigation. The vapor intrusion matrix evaluation will be updated to include new investigation data collected and any updates to the proposed scope will be discussed with the USEPA prior to completion.

GROUNDWATER GAUGING, TESTING, AND SAMPLING

To update historical site data, OBG proposes to complete a site wide gauging round of the current well network to determine site groundwater elevation in accordance with SOP SAS-08-01 Groundwater and Non-Aqueous Phase Liquid Measurement (IBS, September 2008). Monitoring wells MWW-KN, MWW-KS, and MWW/P106 will be included in this gauging round. PGL does not have access to the LaSalle Chestnut parcel, which is currently enrolled in the Illinois Environmental Protection Agency Site Remediation Program, under which a No Further Remediation letter is being pursued; therefore, monitoring wells MWW108, MWW109, and MWW111 will not be gauged or sampled. Water level data will be obtained from staff gages located at the North Branch Canal. Single well aquifer tests in the form of slug tests are proposed at NOS-MWW114, NOS-MWW115, and NOS-

MWW116, in accordance with the methods described in SOP SAS-08-04 Aquifer Testing and Section 4 of the Multi-Site FSP (IBS, September 2008). The purpose of the slug testing is to characterize hydraulic conductivity in the fill unit.

As requested by USEPA in a meeting on April 6, 2018 groundwater samples will be collected from MWW114 and MWW115. Proposed analysis is presented on Table 6. In addition, per USEPA comments dated August 14, 2018, if groundwater is gauged in MWW-KN, MWW-KS, and MWW106, groundwater samples will be collected for analysis. As stated above, MWW108, MNWW109, and MWW111 will not be included. Sampling will be completed in accordance with SAS-08-02 Low-Flow Groundwater Sampling (IBS, September 2008). Groundwater parameters to be analyzed in the field during sampling will include temperature, pH, specific conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity. Similar to soil analysis, groundwater samples from the proposed wells will be analyzed for the full MPG COPC list as identified in SSWP, Rev. 1 (NRT, 2012) with the exception of PCBs as described in the soil sampling section. A sampling and analysis plan summary is presented in Table 6.

OBG inquired about the presence of formerly installed monitoring well MW-1 on the ComEd Parcels and learned that the well still appears to be present. This well will be inspected and the condition will be assessed. Furthermore, if present, thickness of NAPL will be measured at this well.

DATA EVALUATION

Samples collected will be sent to a commercial analytical laboratory under chain-of-custody procedures in accordance with SAS-03-01 Sample Identification, Labeling, Documentation and Packaging for Transport (IBS, 2007), SAS-06-01 Soil Sampling for Chemical Analyses and Geotechnical Testing (IBS, 2007) and the Multi-Site Quality Assurance Project Plan, Revision 1 (IBS, 2007). The analytical data collected during the proposed supplemental RI sampling events will be combined with previous RI data to develop a comprehensive data set for the site. Data validation will be performed as described in Section 6.11 of the SSWP, Rev. 1 (NRT, 2012).

SCHEDULE

Pending USEPA approval, parcel access consideration, utility concerns, permitting issues, and contractor availability, the proposed supplemental RI sampling activities will be initiated in the summer/fall of 2018. The results of the additional assessment will be discussed with USEPA prior to their inclusion in Revision 1 of the RI Report.

SUMMARY

OBG proposes to complete the following supplemental RI activities to address USEPA comments on the RI Report (NRT, 2015), and the data gaps identified through additional analysis. Supplemental activities are presented on Figure 1 and summarized as follows:

- Advance nine soil borings (NOS-SB107 to NOS-SB115) on the ComEd Parcels and two soil borings (NOS-SB116 and NOS-SB117) south of West Hobbie Street to collect soil samples and field observations to delineate potentially affected soils.
- Install soil gas probe NOS-SG21 south of West Hobbie Street and collect two rounds of samples from the new soil gas probe and existing soil gas probes NOS-SG114 and NOS-SG115 to evaluate potential risk south of West Hobbie Street.
- Install soil gas probe NOS-SG22 along the upgradient portion of the North Kingsbury Street Sewer. Two rounds of samples will be collected from the new soil gas probe and existing soil gas probe NOS-SG16 to evaluate potential risk along the utility corridor.

- Install sub-slab soil gas probes NOS-SG19 and NOS-SG20 in Oil Pump Houses No. 1 and No. 2 on the ComEd Parcels and collect two rounds of samples. In addition, two rounds of indoor air samples (along with outdoor ambient air samples) will be collected in the ComEd Control building at location NOS-IA01.
- Complete a sitewide groundwater gauging round to update historical site groundwater contours.
- Complete slug testing on monitoring wells NOS-MWW114, NOS-MWW115, and NOS-MWW116 to collect site specific data on Fill material on the ComEd Parcels.
- Collect one round of groundwater samples from current monitoring wells NOS-MWW114 and NOS-MWW115 to evaluate groundwater upgradient of North Kingsbury Street Sewer and if groundwater is present, collect groundwater samples from locations MWW-KN, MWW-KS, and MWW106.

Please contact the undersigned if you should have any questions regarding the content of this SSWP Addendum 1, Rev. 2.

Very truly yours,
O'BRIEN & GERE ENGINEERS, INC.

Joseph R. Ridgway, PE
Managing Engineer

Patrick F. Kenny
Senior Scientist

Attachments:

Table 1	Hygineering, Inc. Sampling Data Analysis
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Table 3	Tabulated Soil Sampling Results for GS-4 from GaiaTech Report
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Attachment B	Exponent Analysis
Attachment C	Select Borings
Attachment D	RPS GaiaTech Incorporated Report
Attachment E	Draft Illinois No Further Remediation Letter
Attachment F	Vapor Intrusion Decision Matrix

For distribution to: Ms. Sarah Rolfes, USEPA (1 hard copy via FedEx and email and ShareFile)
Mr. Paul Lake, IEPA (2 hard copies via FedEx and email and ShareFile)
Mr. David Klatt, Jacobs (via email and ShareFile)

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United States Environmental Protection Agency, November 2, 2017. *GSI Decision Matrix*

Tables

Table 1: Hygieneering, Inc. Sampling Data Analysis
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

Identified Elevated Sample	Boring Observations (based on Figure 13 of RI Report, Revision 0)	Vertically Delineated?	Laterally Delineated?
Elevated Samples Removed Based On Known Presence of MGP Residuals			
2607-B45	OBSERVATION OF DNAPL	NA	NA
2607-C45	OBSERVATION OF DNAPL	NA	NA
2607-34C	OBSERVATION OF DNAPL	NA	NA
Elevated Samples That Are Vertically and Laterally Delineated			
2607-B9	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-A12	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP26	Y
2607-B12	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP26	Y
2607-C12	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP26	Y
2607-A13	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-A14	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-A15	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-A16	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-A17	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-C17	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring City-SP66	Y
2607-A18	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-B18	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-19B	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP30	Y
2607-19C	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP30	Y
2607-20C	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP30	Y
2607-22B	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SB07	Y
2607-22C	OBSERVATION OF LNAPL OR SHEEN	Y; adjacent boring CENS-SB07	Y
2607-23A	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-25A	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-25C	OBSERVATION OF LNAPL OR SHEEN	Y; adjacent boring City-SP78	Y
2607-26A	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-34A	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-34B	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; by deeper interval	Y
2607-35A	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP35	Y
2607-35B	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP35	Y
2607-35C	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP35	Y
2607-36B	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP35	Y
2607-36C	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring CENS-SP35	Y
2607-26C	OBSERVATION OF LNAPL OR SHEEN	Y; adjacent boring City-SP77	Y
2607-A40	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; adjacent boring City-SP60	Y
2607-B40	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; adjacent boring City-SP60	Y
2607-C40	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y;adjacent boring City-SP60	Y
2607-C41	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring City-SP60	Y
2607-B42	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring City-SP60	Y
2607-C42	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring City-SP60	Y
2607-B43	OBSERVATION OF LNAPL OR SHEEN	Y; adjacent boring City-SP86	Y
2607-C43	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring City-SP86	Y
2607-B44	OBSERVATION OF LNAPL OR SHEEN	Y; adjacent boring City-SP86	Y
2607-C44	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	Y; adjacent boring City-SP86	Y
2607-A45	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	Y; adjacent boring City-SP86	Y
Elevated Samples That Require Additional Delineation			
2607-21C	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	N	Y
2607-23C	OBSERVATION OF LNAPL OR SHEEN	N	Y
2607-24A	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	N	Y
2607-24B	OBSERVATION OF LNAPL OR SHEEN	N	Y
2607-24C	OBSERVATION OF LNAPL OR SHEEN/OBSERVATION OF DNAPL	N	Y
2607-B37	OBSERVATION OF LNAPL OR SHEEN	N	Y
2607-C37	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	N	Y
2607-A38	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	N	Y
2607-B38	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	N	Y
2607-C38	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	N	Y
2607-A39	STAINING IS PRESENT BUT THERE IS NO ODOR OR PID RESPONSE > 2 PPM	N	Y
2607-B39	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	N	Y
2607-C39	ODOR AND/OR PID RESPONSE > 2 PPM AND/OR STAIN WITH PID RESPONSE > 2 PPM	N	Y

Table 2: Vertical Extent Evaluation of Analytical Results
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

				BTEX	BTEX	BTEX	BTEX	TPAH	B(a)P-TEQ	PAH	PAH	SVOC	SVOC	PCBs	PCBs	PCBs	PCBs	PCBs	Metals	Metals	Metals	Metals	Metals	Metals	Metals	Cyanide			
Location	Depth (feet)	Sample Date	Parcel	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes, Total (mg/kg)	TPAH (15) (mg/kg) [1,2]	B(a)P-TEQ (mg/kg) [5]	2-Methylnaphthalene (mg/kg)	Naphthalene (PAH) (mg/kg)	3,3-Dichlorobenzidine (mg/kg)	Dibenzofuran (mg/kg)	PCB, Total (mg/kg)	PCB-1242 (mg/kg)	PCB-1248 (mg/kg)	PCB-1254 (mg/kg)	PCB-1260 (mg/kg)	Antimony, Total (mg/kg)	Arsenic, Total (mg/kg) [3]	Copper, Total (mg/kg)	Iron, Total (mg/kg)	Lead, Total (mg/kg)	Manganese, Total (mg/kg)	Thallium, Total (mg/kg)	Cyanide, Total (mg/kg)	Description of Extent Evaluation	PID Response	Summary of Boring Log Observation at Sample Interval
Residential Soil SL:				*1.2*	*5.8*	*818*	*260*	*NS*	*NS*	*240*	*3.8*	*1.2*	*73*	*1*	*0.23*	*0.23*	*0.24*	*0.24*	*31*	*13*	*3,100*	*55,000*	*400*	*1,800*	*0.78*	*78*			
Exponent City of Chicago Soil Background 95th Percentile Concentrations [4]:				NS	NS	NS	NS	**132**	**15.5**	NS	**0.352**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
Sample Locations Where Vertical Extent is Defined by a Non-Exceeding Sample From a Deeper Sample Interval Within the Same Boring																													
CENS-SP06-001	2-3	07/01/01	ComEd	< 0.007	< 0.007	< 0.007	< 0.007	**181**	**18**	5	*4*	< 1	0.7	--	--	--	--	--	4.1	*44.5*	96.2	--	246	--	0.51	37	Delineated by 18-19 ft interval.	**0**	FILL: Clay, light gray to olive brown, mottled orange/brown, moist, soft, highly plastic, with fine to coarse sand.
CENS-SP35-001	1-3	07/01/01	ComEd	< 0.004	< 0.004	< 0.004	< 0.004	4.9	0.8	< 0.4	< 0.4	< 0.8	< 0.4	--	--	--	--	--	< 1.8	*20.2*	36.4	--	17.6	--	0.3	1.1	Delineated by 22-23 ft interval.	**0**	FILL: cinders, dry, with brick, with medium to coarse sand.
CENS-SP35-002	7-8	07/01/01	ComEd	*7*	*13*	0.6	13	95.5	5	99	*180*	< 0.8	2	--	--	--	--	--	< 2.1	6.3	30.3	--	16.2	--	0.22	0.99	Delineated by 22-23 ft interval.	**269**	FILL: fine to medium sand, black, with fine gravel, trace clay. Coal tar coated.
CENS-SP35-003	15-16	07/01/01	ComEd	*9*	*32*	2	22	**296**	**21**	120	*170*	< 0.8	3	--	--	--	--	--	< 1.9	6.2	32	--	13.7	--	0.4	< 0.44	Delineated by 22-23 ft interval.	**76.8**	CLAY: Gray/brown moist, trace fine gravel medium plastic. Coal tar in fractures.
CENS-SP36-001	5-6	07/01/01	ComEd	0.2	0.7	0.03	2	13.7	1.3	4	*12*	< 1	< 0.5	--	--	--	--	--	< 2.5	2.3	8	--	5.2	--	< 1.2	44	Delineated by 16-17 ft interval.	**23.3**	FILL: clay, tan, moist, medium stiff, medium plastic, with fine to medium sand. Oil sheen.
City-SP58-001	6-8	11/01/02	ROW-Kingsbury	*2.6*	*8.8*	3.5	26	**136**	9.4	--	*47*	--	--	--	--	--	--	--	2.2	1.8	2	--	18	--	< 1.6	--	Delineater by 34-36 ft. interval.	**24.6**	SAND: gray, coarse to fine, wet, trace silt and fine gravel, naphthalene-like odor at 7 ft. bgs.
City-SP58-002	13-15	11/01/02	ROW-Kingsbury	< 0.0098	0.028	< 0.0098	0.074	4.6	0.28	--	**0.63**	--	--	--	--	--	--	--	1.2	*15*	31	--	21	--	*1.3*	--	Delineater by 34-36 ft. interval.	**6.3**	Silty CLAY: brown, trace mottling, moist, low plasticity, trace fine gravel and sand.
City-SP59-001	6-8	11/01/02	ROW-Kingsbury	*25*	*21*	3.4	11.9	114	4.2	--	*67*	--	--	--	--	--	--	--	3	8.6	19	--	57	--	< 1	--	Delineated by 10-12 ft and 34-36 ft. interval.	**43.9**	SAND: dark, gray, medium to fine, wet, some coarse to fine gravel, tar odor, sheen and staining.
City-SP60-001	5-7	11/01/02	ROW-Kingsbury	*6.8*	4.2	7.2	4.6	46.3	7.9	--	*6.8*	--	--	--	--	--	--	--	1.4	5.5	23	--	14	--	< 1.4	--	Delineated by 12-14 ft. and 28-30 ft. interval.	**2.3**	FILL: sand, gravel, and slag; sheen.
City-SP61-001	8-10	11/01/02	ROW-Kingsbury	< 0.0078	< 0.0078	< 0.0078	< 0.0078	1.4	0.26	--	0.081	--	--	--	--	--	--	--	< 1.2	*17*	27	--	40	--	< 1.2	--	Delineated by 24-26 ft. interval.	**0**	Silty CLAY: gray, orange mottling, moist, medium plasticity, trace coarse to fine sand and gravel.
City-SP61-002	14-16	11/01/02	ROW-Kingsbury	0.22	*15*	0.037	5.88	**237**	**16**	--	*20*	--	--	--	--	--	--	--	< 1.1	8.3	34	--	19	--	< 1.1	--	Delineated by 24-26 ft. interval.	**5**	Silty CLAY: gray, orange mottling, moist, medium plasticity, trace coarse to fine sand and gravel. Faint tar odors, trace tar in fractures.
City-SP62-002	12-14	11/01/02	ROW-Kingsbury	*12*	*7*	0.32	8.3	28.7	1.3	--	*30*	--	--	--	--	--	--	--	1.3	*18*	30	--	20	--	*1.4*	--	Delineated by 38-40 ft interval.	**0**	Silty CLAY: gray, wet, high plasticityt, traces coarse to fine gravel.
City-SP64-001	8-10	11/01/02	ROW-Hobbie	0.2	0.13	< 0.0076	0.087	65.8	5.8	--	*12*	--	--	--	--	--	--	--	< 1.2	6.8	25	--	15	--	< 1.2	--	Delineated by 38-40 ft interval.	**10.4**	Silty CLAY: gray, orange mottling, moist, low plasticity, trace sand and gravel. Tar in fractures (9-10').
City-SP64-002	17-19	11/01/02	ROW-Hobbie	*7*	*26*	1.8	14.9	78.7	6.8	--	*67*	--	--	--	--	--	--	--	< 1.2	8.5	33	--	18	--	*1.3*	--	Delineated by 38-40 ft interval.	**6.7**	Silty CLAY: light gray, moist, medium to high plasticity, trace coarse to fine sand and gravel. Tar in fractures (14-20').
City-SP65-001	8-10	11/01/02	ROW-Crosby	*36*	*20*	2.3	15.9	50.9	2.4	--	*33*	--	--	--	--	--	--	--	< 1.1	8.2	30	--	19	--	< 1.1	--	Delineated by 38-40 ft interval.	**31.2**	Silty CLAY: dark gray, organse mottling, moist, medium to low plasticity, trace coarse to fine sand and gravel. Naphthalene-like odors. Trace tar in fractures and tar staining.
City-SP65-002	22-24	11/01/02	ROW-Crosby	*100*	*46*	16	71	117	6.2	--	*150*	--	--	--	--	--	--	--	< 2.3	8.1	27	--	16	--	< 1.1	--	Delineated by 38-40 ft interval.	**4.6**	CLAY: gray, moist, medium plasticity, trace coarse to fine sand and gravel.
City-SP66-001	7-9	11/01/02	ROW-Crosby	0.026	2.8	0.017	3.01	0.58	0.074	--	*7.5*	--	--	--	--	--	--	--	< 2.5	2.9	40	--	14	--	< 1.2	--	Delineated by 28-30 ft interval.	**5.6**	CLAY and SILT: dark gray, no plasticity, some clay, trace coarse to fine sand and gravel. Faint tar odors (7-9').
City-SP66-002	14-16	11/01/02	ROW-Crosby	< 0.0076	< 0.0076	< 0.0076	< 0.0076	0.263	0.065	--	0.26	--	--	--	--	--	--	--	< 2.3	6.1	27	--	14	--	*1.2*	--	Delineated by 28-30 ft interval.	**0**	Silty CLAY: brown/gray, orange mottling, moist, medium plasticity, trace coarse to fine sand and gravel.
City-SP67-001	8-10	11/01/02	ROW-Crosby	*2.1*	*6.5*	0.018	4.1	0.426	0.079	--	*4.6*	--	--	--	--	--	--	--	< 2.4	8.5	37	--	19	--	< 1.2	--	Delineated by 20-22 ft and 28-30 ft. interval.	**10.4**	Silty CLAY: dark gray, moist, medium plasticity, trace coarse to fine sand. Faint tar odor.
City-SP72-001	7-9	11/01/02	ROW-Kingsbury	*7.4*	1.4	< 0.012	1.4	5.2	0.5	--	0.33	--	--	--	--	--	--	--	1.1	5.7	24	--	29	--	< 1.1	--	Delineated by 10-12 ft. interval	**1.1**	Silty CLAY: gray, orange mottling, moist, medium plasticity, some fine sand.
City-SP76-001	8-10	11/01/02	ROW-Hobbie	< 0.01	< 0.01	< 0.01	0.012	1.7	0.17	--	0.16	--	--	--	--	--	--	--	< 3.6	6.9	21	--	25	--	*1.5*	--	Delineated by 22-24 ft. interval.	**0**	Silty CLAY: brown, green mottling, low plasticity, trace gravel.
City-SP85-001	7-9	11/01/02	ROW-Kingsbury	0.012	< 0.0084	< 0.0084	< 0.0084	3.7	0.07	--	< 0.03	--	--	--	--	--	--	--	< 3.4	7.3	29	--	22	--	*1.4*	--	Delineated by 22-24 ft. interval.	**0**	Silty CLAY: dark gray, wet, medium plasticity, trace coarse to fine sand.
City-SP85-002	13-15	11/01/02	ROW-Kingsbury	*10*	*29*	0.12	20.3	28	2	--	*12*	--	--	--	--	--	--	--	< 3.1	4.1	31	--	92	--	< 1	--	Delineated by 22-24 ft. interval.	**10.2**	Silty CLAY: gray, wet, medium plasticity, trace coarse to fine sand.
City-SP87-001	6-8	11/01/02	ROW-Kingsbury	*1.7*	3.1	0.89	2	**520**	**36**	--	*17*	--	--	--	--	--	--	--	< 1.4	3.2	8.4	--	35	--	< 1.4	--	Delineated by 22-24 ft. interval.	**10.7**	SAND: gray, coarse to fine, wet, some gravel, trace silt and clay. Tar stained (6-7')
City-SP87-002	14-16	11/01/02	ROW-Kingsbury	0.2	0.13	0.18	0.47	13	0.16	--	*110*	--	--	--	--	--	--	--	< 7.8	9.2	30	--	19	--	< 1.1	--	Delineated by 22-24 ft. interval.	**5.6**	Silty CLAY: gray, moist, medium plasticity, trace coarse to fine sand and gravel.
MWW/P114	4.5-5.4	06/30/14	ComEd	*1.82*	*32.2*	2.02	18.7	24.22	4.34	1.62	*6.54*	--	0.569	--	--	--	--	--	--	3.8	--	--	32.1	--	--	--	Delineated by 12-14 ft interval.	**122.9**	FILL: coarse to fine sand, light Gray; and very dark grayish Brown; little coarse to fine gravel, trace brick fragments, trace concrete fragments, trace slag, loose, moist to
NOS-MWW101	0.7-1.2	05/23/13	Division	< 0.00099	< 0.0016	< 0.0014	< 0.0036	68.8	6.5	1.04	**2.19**	--	--	< 0.0349	< 0.0349	< 0.0349	< 0.0349	< 0.0349	*83.4*	*54.8*	*3,870*	*105,000*	*2,030*	489	--	< 0.23	Delineated by 5.5-7.5 ft., interval	**0**	FILL: coarse to fine sand, very dark Brown; little silt, little coal pieces and fines, trace fine gravel, trace brick fragments, wet clay (1.3' - 1.5')
NOS-MWW102	0.5-1	05/24/13	Division	< 0.0088	0.0154	0.0191	0.0639	90.9	10.22	0.873	**1.6**	--	--	< 0.0301	< 0.0301	< 0.0301	< 0.0301	< 0.0301	5.5	*14.5*	43.5	26,600	*474*	432	--	< 0.14	Delineated by 5.5-7.5 ft., interval	**0**	FILL: coarse to fine sand, Black; little coal pieces, trace fine gravel, moist
NOS-MWW104	0.7-1.6	08/30/13	ROW-Crosby	< 0.0012	< 0.002	< 0.0018	< 0.0044	27.72	3.49	0.229	0.344	--	< 0.536	< 0.0322	< 0.0322	< 0.0322	< 0.0322	< 0.0322	--	*16.3*	--	--	321	--	--	--	Delineated by 6-6.9 ft. interval and 10-11 ft. interval.	**0**	FILL: silty sand, fine, Brown; trace fine gravel, trace coarse to medium sand, dry little coal and cinder pieces (1.0 - 1.3')
NOS-MWW108 (N)	17.5-18.5	06/03/13	LaSalle	*1.73*	*23.9*	10.5	39.7	**411**	**19.1**	235	*233*	--	5.38	< 0.029	< 0.029	< 0.029	< 0.029	< 0.029	--	9.4	--	--	18.1	--	--	--	Delineated by 25-27 ft. interval.	**16.8**	Coarse to fine sand, oil-wetted (17.8' - 18')
NOS-SB102	0.3-0.8	05/17/13	Division	< 0.0111	0.044	0.0711	0.153	**322**	**29.1**	16.6	*29.3*	--	--	< 0.0328	< 0.0328	< 0.0328	< 0.0328	< 0.0328	5.6	*43.1*	332	53,000	*4,580*	187	--	20.8	Delineated by 7.8-8.8 ft interval.	**0**	FILL: coarse to fine sand, very dark grayish Brown; some slag pieces, little fine gravel, little clay, trace coal pieces (0.3'-0.8'), dry.
NOS-SB105	3-3.5	07/02/13	OTVW	< 0.00074	< 0.0012	< 0.0011	< 0.0027	42.7	4.6	< 0.224	0.256	--	--	< 0.0336	< 0.0336	< 0.0336	< 0.0336	< 0.0336	3.9	*20.4*	122	50,400	*421*	*3,640*	--	< 0.15	Delineated by 7-9 ft. interval.	**0**	FILL: silt, very dark Gray; little coarse to fine sand, trace fine gravel, non-plastic, moist trace coal pieces (2.4') moist to saturated (3.0').
NS006	3	11/30/00	ComEd	0.002	< 0.005	< 0.005	< 0.005	59.9	8.75	0.389	**0.421**	--	0.3	--	--	--	--	--	--	5.28	106	6,310	*403*	187	--	1.16	Delineated by 7-8 ft interval.	**NA**	SAND and GRAVEL: Black sand and angular gravel to 0.5 in. in diameter, with silt and asphalt rubble.

Table 2: Vertical Extent Evaluation of Analytical Results
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

				BTEX	BTEX	BTEX	BTEX	TPAH	B(a)P-TEQ	PAH	PAH	SVOC	SVOC	PCBs	PCBs	PCBs	PCBs	PCBs	Metals	Metals	Metals	Metals	Metals	Metals	Metals	Cyanide			
Location	Depth (feet)	Sample Date	Parcel	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes, Total (mg/kg)	TPAH (15) (mg/kg) [1,2]	B(a)P-TEQ (mg/kg) [5]	2-Methylnaphthalene (mg/kg)	Naphthalene (PAH) (mg/kg)	3,3-Dichlorobenzidine (mg/kg)	Dibenzofuran (mg/kg)	PCB, Total (mg/kg)	PCB-1242 (mg/kg)	PCB-1248 (mg/kg)	PCB-1254 (mg/kg)	PCB-1260 (mg/kg)	Antimony, Total (mg/kg)	Arsenic, Total (mg/kg) [3]	Copper, Total (mg/kg)	Iron, Total (mg/kg)	Lead, Total (mg/kg)	Manganese, Total (mg/kg)	Thallium, Total (mg/kg)	Cyanide, Total (mg/kg)	Description of Extent Evaluation	PID Response	Summary of Boring Log Observation at Sample Interval
Residential Soil SL:				*1.2*	*5.8*	*818*	*260*	*NS*	*NS*	*240*	*3.8*	*1.2*	*73*	*1*	*0.23*	*0.23*	*0.24*	*0.24*	*31*	*13*	*3,100*	*55,000*	*400*	*1,800*	*0.78*	*78*			
Exponent City of Chicago Soil Background 95th Percentile Concentrations [4]:				NS	NS	NS	NS	**132**	**15.5**	NS	**0.352**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
SB01-001	1-2	09/01/05	Division_H	< 0.0062	< 0.0062	< 0.0062	< 0.019	7.9	0.61	< 0.21	0.15	< 0.41	< 0.21	--	--	--	--	--	< 2.4	8.6	33	--	*4,500*	--	< 1.2	< 0.31	Delineated by 9-10 ft. interval and 13-14 ft. interval.	**0**	FILL: Moderate yellowish Brown; silt, some fine sande, some gravel, some ceramic, little brick, cinders, loose, dry.
SB03-002	5-6	09/01/05	Division_H	0.033	0.014	< 0.0067	< 0.02	**186**	13	7	*21*	< 0.47	2.7	--	--	--	--	--	< 2.7	*32*	25	--	--	--	< 1.4	2.6	Delineated by 7-8 ft interval.	**36.5**	FILLIK: Olive gray; silty clay with orange mottling, trace coarse to fine sand, trace brick, hard to very stiff, low plasticity, moist to wet. 3" seam of tar-caoted cinders and
SB09-002	4-5	09/01/05	Division_H	0.012	0.052	< 0.0087	0.051	**435**	**34**	4.2	*6.6*	< 0.51	11	< 0.91	< 0.13	< 0.13	< 0.13	< 0.13	< 3	9.6	32	49,000	< 0.005	1,100	< 1.5	3.5	Delineated by 9-10 ft interval.	**11.9**	FILL: moderate yellowish brown; medium to fine sand, tar-coated cinders, odors (4.25-4.75').
SP-1	6-8	01/27/11	Halsted	< 0.011	< 0.0095	< 0.0077	0.52	19	2.7	2	**1.5**	< 1.4	< 2.1	--	*0.87*	< 0.13	< 0.12	*0.33*	*180*	*28*	200	7,000	*1,900*	270	< 0.33	2.3	Delineated by 12-14 ft interval.	**NA**	FILL: Stained black sand, odor.
SP-10	6-8	01/27/11	Division_H	0.044	0.7	0.076	0.47	**245**	**36**	1.8	**1.9**	< 0.17	0.89	--	< 0.0072	< 0.008	< 0.0073	< 0.0076	*41*	*25*	160	16,000	*1,900*	140	< 0.46	2.6	Delineated by 12-14 ft interval.	**NA**	FILL: Clay.
SP-12	5-7	01/28/11	Halsted	< 0.0081	< 0.0072	< 0.0058	0.039	**360**	**45**	1.6	**1.6**	< 0.17	1.3	< 0.0088	< 0.0071	< 0.0079	< 0.0072	< 0.0075	5.5	*24*	150	48,000	280	440	< 0.43	0.3	Delineated by 12-14 ft interval.	**NA**	FILL: Black sandy, gravelly clay (odor).
SP-14	7-9	01/28/11	Halsted	*2.9*	*9.3*	0.91	7	**1,874**	**153**	160	*350*	< 3.4	35	< 0.0085	< 0.0069	< 0.0077	< 0.0071	< 0.0073	2.1	*15*	51	16,000	*490*	300	< 0.4	2	Delineated by 12-14 ft interval.	**NA**	FILL: black sandy clay with concrete pieces, odor.
SP-16	7-9	01/28/11	Division_H	*3.1*	1.2	0.77	0.87	117	14.4	7.2	*22*	< 0.15	2.8	--	< 0.0063	< 0.0071	< 0.0065	< 0.0067	0.8	4.9	15	9,000	73	230	< 0.34	12	Delineated by 12-14 ft interval.	**NA**	FILL: black sandy clay with coal pieces, odor.
SP-2	7-9	01/27/11	Halsted	0.034	< 0.013	0.16	0.55	49.7	6.1	0.67	**0.71**	< 0.17	0.35	< 0.0086	< 0.007	< 0.0078	< 0.0071	< 0.0074	*69*	*45*	470	28,000	*3,300*	410	< 0.46	2.6	Delineated by 12-14 ft interval.	**NA**	FILL: Stained black clay.
SP-3	2-4	01/27/11	Division_H	< 0.00067	< 0.00075	< 0.00066	< 0.00081	84.5	10.5	0.39	**0.65**	< 0.14	0.65	--	< 0.0059	< 0.0065	< 0.006	< 0.0062	4.8	*16*	270	15,000	*440*	300	< 0.35	0.7	Delineated by 12-14 ft interval.	**NA**	FILL: Brown/gray caly, sand, gravel, concrete, and brick.
SP-5	4-6	01/27/11	Division_H	0.0095	0.049	0.011	0.058	25.4	2.7	3.8	*22*	< 0.14	0.52	< 0.015	< 0.012	< 0.013	< 0.012	< 0.013	0.99	11	34	18,000	86	270	< 0.37	2.5	Delineated by 12-14 ft interval.	**NA**	FILL: Stained gravel, and clay.
SP-6	5-7	01/27/11	Division_H	< 0.091	2.7	0.77	12	**228**	13	46	*20*	< 0.16	3.6	< 0.0082	< 0.0067	< 0.0074	< 0.0068	< 0.0071	0.41	4.7	19	8,300	26	170	< 0.39	13	Delineated by 12-14 ft interval.	**NA**	FILL: Red, brown wood and clay (odor).
SP-7	7-9	01/27/11	Division_H	0.42	*28*	1.4	54	**198**	9	100	*110*	< 0.76	2.2	< 0.0082	< 0.0067	< 0.0075	< 0.0068	< 0.0071	< 0.25	4.8	28	18,000	16	160	< 0.37	0.43	Delineated by 12-14 ft interval.	**NA**	FILL: stained gray clay, and sand (odor).
SP-8	3-5	01/27/11	Division_H	< 0.00081	< 0.0009	< 0.0008	< 0.00098	**161**	15	0.85	**1.1**	< 0.14	1.5	--	< 0.0057	< 0.0064	< 0.0058	< 0.0061	3.9	9.9	470	16,000	*910*	270	< 0.35	0.29	Delineated by 12-14 ft interval.	**NA**	FILL: Brown/gray clay, sand, gravel, brick, coal.
SP-9	5-7	01/27/11	Division_H	< 0.0012	< 0.0014	< 0.0012	< 0.0015	**1,196**	**124**	8.8	*27*	< 0.18	13	--	< 0.075	*1.8*	< 0.076	< 0.079	0.9	*13*	57	30,000	90	630	< 0.42	0.28	Delineated by 12-14 ft interval.	**NA**	FILL: Stained black clay, with coal.
Sample Locations Where Vertical Extent is Defined by a Non-Exceeding Sample From a Deeper Sample Interval Within an Adjacent Boring																													
B-2	4-6	09/11/99	Halsted	0.0024	< 0.005	< 0.005	< 0.005	76.3	**15.59**	--	**1.13**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delineated by 12-14 ft. interval at SP-16, located ~25 ft. to the northwest.	**0**	FILL: Clayey sand-like material, white, granular, mothball-like odor from 5.5-6.5'.
B-3	6.5-8.5	09/11/99	Halsted	< 0.002	< 0.005	< 0.005	< 0.005	**423**	**51.9**	--	**3.41**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delineated by 12-14 ft. interval at SP-14, located ~15 ft. to the southeast.	**0**	FILL and SILTY CLAY: black soft, moist, with medium to fine sand.
B-4	2.5-4.5	09/11/99	Halsted	< 0.002	< 0.005	< 0.005	< 0.005	**185**	**24.5**	--	**1.48**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delineated by 12-14 ft. interval at SP-8, located ~30 ft. to the south. Also delineated by 8-9 ft. interval at SB07, located ~45 ft. to the southeast.	**0**	FILL: sand and gravel; clayey sand, black, soft, with brick fragments.
CENS-SB01-001	8-10	07/01/01	ComEd	0.03	0.03	< 0.005	0.05	8.4	0.9	3	*5*	< 0.8	< 0.4	--	--	--	--	--	< 1.7	9.3	29.7	--	17.8	--	0.56	3.8	Delineated by 20-22 ft interval at NNS9903, located ~ 50 feet away	**8.1**	CLAY: gray/tan, moist, very stiff, medium plastic trace fine gravel.
CENS-SB02-001	8-10	07/01/01	ComEd	< 0.005	< 0.005	< 0.005	< 0.005	< 0.4	0.2	< 0.4	< 0.4	< 0.8	< 0.4	--	--	--	--	--	< 1.9	1.4	15.9	--	13.1	--	*0.85*	< 0.41	Delineated by 8-10 ft interval at CENS-SP01, located ~10 ft. to the south. This is a very minor Thallium exceedance, and CENS-SP01 has a clean sample at the same depth.	**NA**	CLAY: gray, moist, firm, medium plastic with silt, trace fine to coarse sand, trace fine gravel.
CENS-SP04-001	2-3	07/01/01	ComEd	< 0.003	0.06	< 0.003	0.2	**138**	15	1	*4*	< 0.8	4	--	--	--	--	--	< 1.9	*14.9*	40.8	--	51.9	--	0.41	3.1	Delineated by 10-12 ft. interval at CENS-SP05, located ~45 ft. to the north-northwest.	**0**	FILL: fine to medium sand, medium to light brown, with silt, trace fine gravel.
CENS-SP08-001	7-8	07/01/01	ComEd	*6*	*50*	2	79	**494**	**31**	190	*620*	< 0.9	4	--	--	--	--	--	< 1.8	5.9	32	--	23	--	0.32	24.7	Delineated by 18-20 ft. interval at CENS-SP07, located ~40 ft. to the northwest.	**136**	FILL: fine to medium sand, light/medium brown, with silt trace amount coal tar staining.
CENS-SP16-002	11-12	07/01/01	ComEd	*110*	*18*	86	45	**571**	**23**	*390*	*630*	< 0.8	13	--	--	--	--	--	< 2	11.5	40	--	199	--	< 0.33	1.6	Delineated by 22-23 ft interval at CENS-SP35 (sample 004), located ~40 feet to the north.	**64.8**	CLAY: light gray to olive brown, mottled orange/brown, soft, highly plastic, with fine to coarse sand. Coal tar staining.
CENS-SP16-003	15-16	07/01/01	ComEd	*230*	*130*	200	120	**635**	**25**	*390*	*860*	< 0.8	14	--	--	--	--	--	< 2.1	9.7	31.4	--	50.7	--	0.38	3.1	Delineated by 22-23 ft interval at CENS-SP35 (sample 004), located ~40 feet to the north.	**38.9**	CLAY: light gray to olive brown, mottled orange/brown, soft, highly plastic, with fine to coarse sand. Coal tar in fractures.
CENS-SP22-001	7-8	07/01/01	ComEd	*10*	*40*	0.9	29	**266**	**16**	140	*200*	< 0.8	5	--	--	--	--	--	< 1.6	9.7	36	--	245	--	< 0.96	2.7	Delineated by 29-31 ft. interval at CENS-SP43, located ~60 ft. to the south	**48.3**	Fill: fine to medium sand, light brown, with red brick fragments, with fine gravel.
CENS-SP23-002	8-10	07/01/01	ComEd	0.07	0.9	0.009	0.6	113	7	4	*6*	< 1	3	--	--	--	--	--	< 2.1	3.4	18.9	--	20.2	--	< 0.88	< 1.3	Delineated by 18-20 ft interval at CENS-SB07-007, ~20 feet to the east	**7.2**	CLAY: light gray to olive brown, mottled orange/brown, dry, stiff, with coarse to fine sand, with silt. Slight oily odor, oil staining from 10'-10.5'.
CENS-SP27-001	7-8	07/01/01	ComEd	< 0.1	< 0.1	< 0.1	< 0.1	41	6	2	*4*	< 0.8	1	--	--	--	--	--	< 2.1	7.8	51.1	--	36.7	--	< 0.2	11.4	Delineated by 10-12 ft. interval at CENS-SP05, located ~50 ft. to the northeast.	**176**	CLAY: light gray to olive brown, mottled orange/brown, dry, stiff, with coarse to fine sand, with silt. Oil stained with solvent odor.
CENS-SP29-001	2-3	07/01/01	ComEd	*8*	5	10	21	< 0.4	0.2	< 0.4	*4*	< 0.8	< 0.4	--	--	--	--	--	< 1.7	7.8	30.9	--	29	--	< 2	< 0.48	Delineated by 18-20 ft interval at CENS-SB07-001, ~30 ft away to the east	**0**	CLAY: brown, dry, very stiff, trace fine gravel, fine to medium sand.
CENS-SP29-002	9-10	07/01/01	ComEd	*150*	*89*	85	130	**359**	**18**	220	*350*	< 0.8	4	--	--	--	--	--	< 2	8.2	31.3	--	18.3	--	< 1.2	1.2	Delineated by 18-20 ft interval at CENS-SB07-001, ~30 ft away to the east	**150**	GRAVEL: fine, with coarse sand, coal tar coated and stained.
CENS-SP29-003	15-16	07/01/01	ComEd	*53.2*	*8.72*	58	48.5	**188**	5.65	--	*153*	--	--	--	--	--	--	--	--	< 0.01	< 0.01	--	0.033	--	--	< 0.25	Delineated by 18-20 ft interval at CENS-SB07-001, ~30 ft away to the east	**180**	CLAY: tan/gray, moist, stiff, medium plastic, trace fine gravel. Coal tar stained, Coal tar in fractures.
CENS-SP33-001	1-3	07/01/01	ComEd	*19*	*72*	1	84	**3,628**	**209**	*1,800*	*2,400*	*6*	29	--	--	--	--	--	< 1.7	6.2	32.9	--	116	--	*0.89*	0.68	Delineated by 29-31 ft interval at CENS-SP43 (Sample 001) located ~65 ft. to the south.	**125**	FILL: gravel with brick, trace plastic trace sand, trace cinders, trace fine to medium gravel, some clay. Coal tar staining.
CENS-SP33-002	6-8	07/01/01	ComEd	*35*	*73*	0.3	33	**677**	**39**	*360*	*430*	< 0.8	5	--	--	--	--	--	< 2	3.3	32.4	--	37.8	--	< 0.79	< 0.34	Delineated by 29-31 ft interval at CENS-SP43 (Sample 001) located ~65 ft. to the south.	**69**	FILL: trace sand, trace cinders, trace fine to medium gravel, some clay. Strong odor, coal tar coated.

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North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

				BTEX	BTEX	BTEX	BTEX	TPAH	B(a)P-TEQ	PAH	PAH	SVOC	SVOC	PCBs	PCBs	PCBs	PCBs	PCBs	Metals	Metals	Metals	Metals	Metals	Metals	Metals	Cyanide			
Location	Depth (feet)	Sample Date	Parcel	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes, Total (mg/kg)	TPAH (15) (mg/kg) [1,2]	B(a)P-TEQ (mg/kg) [5]	2-Methylnaphthalene (mg/kg)	Naphthalene (PAH) (mg/kg)	3,3-Dichlorobenzidine (mg/kg)	Dibenzofuran (mg/kg)	PCB, Total (mg/kg)	PCB-1242 (mg/kg)	PCB-1248 (mg/kg)	PCB-1254 (mg/kg)	PCB-1260 (mg/kg)	Antimony, Total (mg/kg)	Arsenic, Total (mg/kg) [3]	Copper, Total (mg/kg)	Iron, Total (mg/kg)	Lead, Total (mg/kg)	Manganese, Total (mg/kg)	Thallium, Total (mg/kg)	Cyanide, Total (mg/kg)	Description of Extent Evaluation	PID Response	Summary of Boring Log Observation at Sample Interval
Residential Soil SL:				*1.2*	*5.8*	*818*	*260*	*NS*	*NS*	*240*	*3.8*	*1.2*	*73*	*1*	*0.23*	*0.23*	*0.24*	*0.24*	*31*	*13*	*3,100*	*55,000*	*400*	*1,800*	*0.78*	*78*			
Exponent City of Chicago Soil Background 95th Percentile Concentrations [4]:				NS	NS	NS	NS	**132**	**15.5**	NS	**0.352**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
CENS-SP34-001	1-3	07/01/01	ComEd	< 0.005	< 0.005	< 0.005	< 0.005	**344**	**32**	4	*6*	< 0.8	6	--	--	--	--	--	< 1.8	6.8	51.2	--	164	--	0.37	< 0.42	Delineated by 22-23 ft. interval at CENS-SP35 (Sample 004) located ~50 feet to the northwest.	**0**	FILL: medium to coarse sand, dry, with fine to medium gravel.
CENS-SP34-003	19-20	07/01/01	ComEd	*495*	*215*	406	*281*	**184**	6.18	--	*155*	--	--	--	--	--	--	--	--	0.025	0.209	--	3.25	--	--	< 0.25	Delineated by 22-23 ft. interval at CENS-SP35 (Sample 004) located ~50 feet to the northwest.	**329**	FILL: clay gray, soft, medium plastic, with silt, trace fine to medium sand. Black coal, coal tar coated brick.
CENS-SP39-001	3-4	07/01/01	ComEd	0.01	< 0.005	< 0.005	< 0.005	**222**	8	< 0.4	< 0.4	< 0.8	2	--	--	--	--	--	< 1.8	3.9	7.8	--	100	--	< 0.21	1.8	Delineated by 29-31 ft interval at CENS-SP43 (Sample 001) located ~30 ft. to the east	**8.2**	FILL: fine gravel ,with fine to medium sane. Slight odor.
CENS-SP39-002	10-11	07/01/01	ComEd	*2*	*6*	0.1	5	**165**	**16**	13	*36*	< 0.8	3	--	--	--	--	--	< 1.9	6	105	--	243	--	< 0.22	1.6	Delineated by 29-31 ft interval at CENS-SP43 (Sample 001) located ~30 ft. to the east	**36.8**	FILL: sand, brown/black, fine to medium sand, moist, soft, with clay. Slight odor.
CENS-SP41-001	9-10	07/01/01	ComEd	*309*	*425*	253	*462*	**725**	**20.2**	--	*542*	--	--	--	--	--	--	--	--	0.023	< 0.01	--	0.032	--	--	< 0.25	Delineated by 29-31 ft interval at CENS-SP43 (Sample 001) located ~60 ft. to the east	**300**	FILL: medium to coarase sand, with fine gravel, trace clay. Strong odor, coal tar saturated.
CENS-SP44-001	6-8	07/01/01	ComEd	*19*	*7*	0.01	0.2	**360**	**29**	57	*85*	< 0.8	4	--	--	--	--	--	2.4	9.9	66.7	--	*418*	--	< 0.19	4.1	Delineated by 39-40 ft. interval at City-SP65 (Sample 003), located ~50 ft. to the northeast.	**110**	FILL: clay, gray/brown, wet, soft, with silt, trace brick. Coal tar coated.
CFA16-F-002	10-10	02/01/07	LaSalle	--	--	--	--	< 0.029	0.067	--	*14*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delineated by 8-9 ft. interval at SB04, located ~30 ft. to the north.	**NA**	No boring log available.
City H-3	3	05/01/02	ROW-Hobbie	< 0.013	< 0.013	< 0.013	< 0.013	87.7	**20.6**	--	**1.2**	--	--	--	--	--	--	--	--	*13*	--	--	21	--	--	--	Delineated by 4 ft sample at City H-4, located ~35 ft away. Minor exceedances of background and arsenic in this sample.	**0.6**	FILL: Black seams, slightly moist.
City H-6	5	05/01/02	ROW-Hobbie	< 0.016	< 0.016	< 0.016	< 0.016	99.2	**22**	--	**0.92**	--	--	--	--	--	--	--	--	3	--	--	5.6	--	--	--	Delineated by 7 ft sample at City H-5, located ~30 ft to the west.	**0.5**	FILL: gravel, blue/green and pink wood, moist.
City H-7	10	05/01/02	ROW-Hobbie	*23*	*28*	2	31	39	2.6	--	*33*	--	--	--	--	--	--	--	--	4.7	--	--	14	--	--	--	Delineated by 38-40 ft. sample at City-SP64, located ~15 ft. to the west.	**0.4**	Silty CLAY: Brown, stiff, moist, trace sand and gravel.
City H-8	3	05/01/02	ROW-Hobbie	< 0.01	< 0.01	< 0.01	< 0.01	76.5	**16.8**	--	**2.4**	--	--	--	--	--	--	--	--	11	--	--	21	--	--	--	Delineated by 6-8 ft and 16-18 ft. interval at City-SP78 (Samples 001 and 002), located ~40 feet to the east.	**0.6**	FILL: Black, moist.
City H-9	5	05/01/02	ROW-Hobbie	< 0.009	< 0.009	< 0.009	< 0.009	81.4	**20.1**	--	**2.6**	--	--	--	--	--	--	--	--	8	--	--	16	--	--	--	Delineated by 6-8 ft and 16-18 ft. interval at City-SP78 (Samples 001 and 002), located ~40 feet to the south.	**0.1**	Clay FILL: brown, moist.
City K-3	7	05/01/02	ROW-Kingsbury	*15*	*26*	14	30	**157**	14	--	*54*	--	--	--	--	--	--	--	--	*22*	--	--	280	--	--	--	Delineated by 8-10 ft. interval at CENS-SB01, located ~50 ft. to the north.	**NA**	Boring Log not available.
City K-4	6	05/01/02	ROW-Kingsbury	*44*	*77*	9.6	67	**512**	**32**	--	*170*	--	--	--	--	--	--	--	--	*33*	--	--	*2,100*	--	--	--	Delineated by 22-24 ft. interval at City-SP87, located ~30 ft. to the southeast.	**NA**	Boring Log not available.
City K-5	8	05/01/02	ROW-Kingsbury	*1.4*	3.3	2.4	8	99.4	**15.6**	--	*42*	--	--	--	--	--	--	--	--	3.5	--	--	20	--	--	--	Delineated by 22-24 ft. interval at City-SP87, located ~20 ft. to the north.	**NA**	Boring Log not available.
City K-6	5	05/01/02	ROW-Kingsbury	*42*	*50*	5.9	21.3	111	**17.7**	--	*27*	--	--	--	--	--	--	--	--	7.3	--	--	68	--	--	--	Delineated by 34-36 ft. interval at City-SP59, located ~40 ft. to the southwest.	**NA**	Boring Log not available.
City K-7	7	05/01/02	ROW-Kingsbury	*23*	*84*	4.6	69	**555**	**33**	--	*370*	--	--	--	--	--	--	--	--	7.2	--	--	65	--	--	--	Delineated by 34-36 ft. interval at City-SP59, located ~15 ft. to the northwest.	**50**	Fine sand FILL: brown, very moist, very black.
City K-8	8	05/01/02	ROW-Kingsbury	*41*	*210*	22	155	**473**	**30**	--	*420*	--	--	--	--	--	--	--	--	*15*	--	--	360	--	--	--	Delineated by 34-36 ft. interval at City-SP59, located ~60 ft. to the north.	**39**	Silty Clay FILL: Black, grades soft, very moist.
City K-9	5	05/01/02	ROW-Kingsbury	*16*	*580*	32	*700*	56.4	2.9	--	*120*	--	--	--	--	--	--	--	--	2.1	--	--	0.95	--	--	--	Delineated by 12-14 ft. interval at SP-16, located ~50 ft. to the east.	**44**	Silty Clay FILL: Black, medium stiff, very moist, grades soft.
City-SP69-001	8-10	11/01/02	ROW-Kingsbury	0.42	*23*	0.11	9.9	101	4	--	*39*	--	--	--	--	--	--	--	< 1.2	7.7	32	--	36	--	< 1.2	--	Delineated by 22-24 ft. interval at City-SP87, located ~40 ft. to the northeast.	**0**	Silty CLAY: gray, moist, medium to high plasticity, trace coarse to fine sand and gravel. Tar in fractures (7-10').
City-SP69-002	11-12	11/01/02	ROW-Kingsbury	*3.3*	*36*	< 0.28	9.2	50.1	2.6	--	*44*	--	--	--	--	--	--	--	< 1.1	*16*	44	--	25	--	< 1.1	--	Delineated by 22-24 ft. interval at City-SP87, located ~40 ft. to the northeast.	**0**	Silty CLAY: gray, moist, low plasticity, trace coarse to fine sand and gravel. No visible tar.
City-SP70-001	8-10	11/01/02	ROW-Kingsbury	0.38	3.4	0.061	2.31	**139**	10.9	--	*38*	--	--	--	--	--	--	--	< 1.2	5.7	28	--	45	--	< 1.2	--	Delineated by 34-36 ft. interval at City-SP59, located ~ 40 ft. to the east.	**6.7**	Silty CLAY: brown, trace orange mottling, moist, medium to medium plasticity, trace coarse to fine sand and gravel. Tar in fractures (8-17').
City-SP70-002	11-13	11/01/02	ROW-Kingsbury	*3.9*	*38*	0.46	22.8	**193**	9.5	--	*110*	--	--	--	--	--	--	--	< 1.1	8.4	35	--	20	--	< 1.1	--	Delineated by 34-36 ft. interval at City-SP59, located ~ 40 ft. to the east.	**4.6**	Silty CLAY: brown, trace orange mottling, moist, medium to medium plasticity, trace coarse to fine sand and gravel. Tar in fractures (8-17').
City-SP70-003	18-20	11/01/02	ROW-Kingsbury	< 0.0067	< 0.0067	< 0.0067	< 0.0067	0.261	0.065	--	0.036	--	--	--	--	--	--	--	< 1.1	9.7	32	--	19	--	*1.2*	--	Delineated by 34-36 ft. interval at City-SP59, located ~ 40 ft. to the east.	**0**	Sily CLAY: gray, wet, high plasticity, trace coarse to fine
City-SP71-001	7-9	11/01/02	ROW-Kingsbury	0.51	1	< 0.0096	1.1	9.1	0.54	--	*7.9*	--	--	--	--	--	--	--	< 1.2	6.5	21	--	20	--	< 1.2	--	Delineated by 34-36 ft. interval at City-SP59, located ~ 50 ft. to the northeast.	**1.8**	FILL: coarse to fine sand and gravel, dark gray, wet, some silt.
City-SP71-002	14-16	11/01/02	ROW-Kingsbury	< 0.0091	2.7	< 0.0091	3.1	35.1	2.1	--	**3.4**	--	--	--	--	--	--	--	1.2	11	35	--	20	--	*1.4*	--	Delineated by 34-36 ft. interval at City-SP59, located ~ 50 ft. to the northeast.	**0**	Silty CLAY: gray, moist, trace goarse to fine sand and gravel, low plasticity.
City-SP74-001	6-8	11/01/02	ROW-Kingsbury	< 0.0083	< 0.0083	< 0.0083	< 0.0083	0.274	0.065	--	0.039	--	--	--	--	--	--	--	< 1.1	*18*	33	--	19	--	< 1.1	--	Delineated by 38-40 ft. interval at City-SP62, located ~40 ft. to the east-southeast.	**1.3**	Silty CLAY: gray, moist, low plasticity, trace coarse to fine sand and gravel.
City-SP74-002	12-14	11/01/02	ROW-Kingsbury	*15*	*24*	0.081	11.6	**139**	5.8	--	*150*	--	--	--	--	--	--	--	< 1.1	5.3	29	--	15	--	*1.4*	--	Delineated by 38-40 ft. interval at City-SP62, located ~40 ft. to the east-southeast.	**35.2**	Silty CLAY: gray, moist, low plasticity, trace coarse to fine sand and gravel. Becomes orange mottled, tar in fractures (10-17').
City-SP74-003	18-20	11/01/02	ROW-Kingsbury	*8.8*	*20*	15	28.1	6.2	0.067	--	*63*	--	--	--	--	--	--	--	< 1.1	9.5	34	--	19	--	*1.5*	--	Delineated by 38-40 ft. interval at City-SP62, located ~40 ft. to the east-southeast.	**0**	Silty CLAY: gray, orange mottling, moist, low plasticity, trace coarse to fine sand and gravel. No tar observed.
City-SP75-001	5-7	11/01/02	ROW-Kingsbury	< 0.013	< 0.013	< 0.013	< 0.013	10.3	1.12	--	**0.47**	--	--	--	--	--	--	--	6.7	*15*	170	--	250	--	< 1.1	--	Delineated by 38-40 ft. interval at City-SP62, located ~60 ft. to the northeast.	**0**	Silty CLAY: gray, wet, medium plasticity, some medium to fine sand, trace fine gravel.
City-SP75-002	14-16	11/01/02	ROW-Kingsbury	*7*	*19*	1.1	15	**174**	7	--	*120*	--	--	--	--	--	--	--	< 1.1	8.8	35	--	19	--	*1.8*	--	Delineated by 38-40 ft. interval at City-SP62, located ~60 ft. to the northeast.	**19.9**	Silty CLAY: gray, wet, medium plasticity, some medium to fine sand, trace fine gravel.
City-SP75-003	18-20	11/01/02	ROW-Kingsbury	*2*	*22*	25	49	7	0.067	--	*92*	--	--	--	--	--	--	--	< 1.1	10	39	--	21	--	*1.3*	--	Delineated by 38-40 ft. interval at City-SP62, located ~60 ft. to the northeast.	**10.4**	Silty CLAY: gray, wet, medium plasticity, some medium to fine sand, trace fine gravel. Becomes moist to wet, high plasticity, trace coarse sand and gravel.
City-SP81-002	10-12	11/01/02	ROW-Crosby	< 0.0091	< 0.0091	< 0.0091	< 0.0091	< 0.028	0.065	--	< 0.028	--	--	--	--	--	--	--	< 2.3	1.5	21	--	14	--	*1.9*	--	Delineated by 28-30 ft. interval at City-SP66, located ~50 ft. to the west.	**0**	Silty CLAY: gray, orange mottling, low plasticity, trace coarse to fine sand and gravel.
City-SP82-001	2-3	11/01/02	ROW-Crosby	< 0.0061	< 0.0061	< 0.0061	< 0.0061	50.6	7.3	--	0.2	--	--	--	--	--	--	--	1.5	*16*	230	--	320	--	< 1.1	--	Delineated by 20-22 ft. interval at City-SP67, located ~65 ft. to the west.	**0**	FILL: sand, and gravel.

Table 2: Vertical Extent Evaluation of Analytical Results
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

				BTEX	BTEX	BTEX	BTEX	TPAH	B(a)P-TEQ	PAH	PAH	SVOC	SVOC	PCBs	PCBs	PCBs	PCBs	PCBs	Metals	Metals	Metals	Metals	Metals	Metals	Metals	Cyanide			
Location	Depth (feet)	Sample Date	Parcel	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes, Total (mg/kg)	TPAH (15) (mg/kg) [1,2]	B(a)P-TEQ (mg/kg) [5]	2-Methylnaphthalene (mg/kg)	Naphthalene (PAH) (mg/kg)	3,3-Dichlorobenzidine (mg/kg)	Dibenzofuran (mg/kg)	PCB, Total (mg/kg)	PCB-1242 (mg/kg)	PCB-1248 (mg/kg)	PCB-1254 (mg/kg)	PCB-1260 (mg/kg)	Antimony, Total (mg/kg)	Arsenic, Total (mg/kg) [3]	Copper, Total (mg/kg)	Iron, Total (mg/kg)	Lead, Total (mg/kg)	Manganese, Total (mg/kg)	Thallium, Total (mg/kg)	Cyanide, Total (mg/kg)	Description of Extent Evaluation	PID Response	Summary of Boring Log Observation at Sample Interval
Residential Soil SL:				*1.2*	*5.8*	*818*	*260*	*NS*	*NS*	*240*	*3.8*	*1.2*	*73*	*1*	*0.23*	*0.23*	*0.24*	*0.24*	*31*	*13*	*3,100*	*55,000*	*400*	*1,800*	*0.78*	*78*			
Exponent City of Chicago Soil Background 95th Percentile Concentrations [4]:				NS	NS	NS	NS	**132**	**15.5**	NS	**0.352**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
City-SP82-003	10-12	11/01/02	ROW-Crosby	< 0.0068	< 0.0068	< 0.0068	< 0.0068	1	0.104	--	0.064	--	--	--	--	--	--	--	< 2.3	8.6	34	--	27	--	*1.3*	--	Delineated by 20-22 ft. interval at City-SP67, located ~65 ft. to the west.	**0**	Silty CLAY: brown, orange mottling, moist, medium plasticity, trace coarse to fine sand and gravel.
City-SP86-001	6-8	11/01/02	ROW-Kingsbury	*4.3*	*17*	0.24	2.3	90.3	8.6	--	*40*	--	--	--	--	--	--	--	< 3.6	4.6	34	--	19	--	< 1.2	--	Delineated by 34-36 ft. interval at City-SP59, located ~ 50 ft. to the east-southeast.	**134**	SILT: dark gray, wet, soft, some fine sand and clay, tar odors, tar in fractures.
City-SP86-002	12-14	11/01/02	ROW-Kingsbury	*3.3*	*9.2*	0.071	14.6	19.7	1.16	--	*68*	--	--	--	--	--	--	--	< 3.5	8.5	33	--	20	--	*1.9*	--	Delineated by 34-36 ft. interval at City-SP59, located ~ 50 ft. to the east-southeast.	**0**	Silty CLAY: brown, orange mottling, moist, low plasticity, trace coarse to fine sand and gravel. Faint tar odors to 9'.
City-SP86-003	22-24	11/01/02	ROW-Kingsbury	< 0.0099	< 0.0099	< 0.0099	< 0.0099	0.36	0.065	--	0.06	--	--	--	--	--	--	--	< 3.3	9.7	30	--	17	--	*1.3*	--	Delineated by 34-36 ft. interval at City-SP59, located ~ 50 ft. to the east-southeast.	**0**	Silty CLAY: gray, orange mottling, moist, high plasticity, trace coarse to fine sand and gravel.
City-SP88-001	8-10	11/01/02	ROW-Kingsbury	*2.4*	*10*	0.99	6.6	10.3	0.51	--	*37*	--	--	--	--	--	--	--	< 8.2	8.9	27	--	38	--	< 1.2	--	Delineated by 22-24 ft. sample at City-SP87, located ~45 ft. to the east.	**1.9**	SAND: Medium, brown, wet. Gravel lens (4" thick) to SILT: gray, no plasticity, some clay, trace coarse to fine sand and gravel. Faint odors at 10', slight sheen.
City-SP88-002	14-16	11/01/02	ROW-Kingsbury	*4.6*	*13*	0.061	17.6	8.3	0.82	--	*16*	--	--	--	--	--	--	--	< 8.1	5.9	31	--	39	--	*1.5*	--	Delineated by 22-24 ft. sample at City-SP87, located ~45 ft. to the east.	**0**	SILT: gray, no plasticity, some clay, trace coarse to fine sand and gravel.
EXCAV 3B	-4.5	12/15/99	ComEd	< 0.006	0.071	< 0.006	< 0.018	39.8	3	< 0.398	*14*	--	0.507	--	--	--	--	--	--	3.3	28	15,700	51	290	--	10.5	Delineated by 20-22 ft. interval at NS9903, located ~40 ft. to the north-northwest. Also delineated by 18-19 ft. interval at CENS-SP06, located ~50 ft. to the north.	**NA**	
MWW/P115D	11-12	07/08/14	ComEd	*52.3*	*61.8*	< 1.57	64.3	48.42	7.97	34.1	*142*	--	2.71	--	--	--	--	--	--	10.4	--	--	17	--	--	--	Delineated by 20-22 ft. interval at CENS-SB06, located ~10 ft. to the west.	**394.7**	CLAY (CL): silty, dark grayish Brown; trace coarse gravel, stiff to hard, trace oil wetted in clay fissures, strong tar-like odor (10.0'-16.7')
MWW/P115D	18-20	07/08/14	ComEd	*98.7*	< 0.178	59.6	< 0.693	0.131	0.0162	0.0381	0.0639	--	< 0.042	--	--	--	--	--	--	12.2	--	--	16.4	--	--	--	Delineated by 20-22 ft. interval at CENS-SB06, located ~10 ft. to the west.	**10**	CLAY (CL): silty, dark grayish Brown; trace coarse gravel, stiff to hard, trace oil wetted in clay fissures, strong tar-like odor (10.0'-16.7').
MWW/P115E	0.6-1.1	07/10/14	ComEd	0.365	0.143	0.862	1.6	**136**	**20.33**	8.15	*7.4*	--	< 0.521	--	--	--	--	--	--	9.9	--	--	174	--	--	--	Delineated by 20-22 ft. interval at CENS-SB06, located ~10 ft. to the west.	**0**	CLAY (CL): dark grayish brown to Gray; very stiff to stiff, slight tar-like odor
NOS-MWP106	0.6-1.6	08/29/13	ROW-Hobbie	< 0.0088	< 0.0107	< 0.0187	< 0.0473	29.5	3.8	< 0.201	< 0.201	--	< 0.803	*13.5*	< 0.904	*13.5*	< 0.904	< 0.904	--	6.3	--	--	80.6	--	--	--	Delineated by 14-16 ft. interval at City-SP77, located ~30 ft. to the east.	**0**	FILL: fine sand, olive Gray; little coarse to medium sand, trace coarse to fine gravel, dry Black (1.3 - 1.5') trace brick (1.5').
NOS-MWP106	5-6.5	08/29/13	ROW-Hobbie	< 0.0011	< 0.0018	< 0.0016	< 0.004	**213**	**33.7**	4.33	*34.5*	--	< 1.26	< 0.0379	< 0.0379	< 0.0379	< 0.0379	< 0.0379	--	*43.4*	--	--	264	--	--	--	Delineated by 14-16 ft. interval at City-SP77, located ~30 ft. to the east.	**0**	FILL: coarse to fine sand, Gray; to very dark Gray (5Y 3/1), little silt, trace fine gravel, trace clay, moist.
NOS-MWW111	5.6-6.1	06/03/13	LaSalle	< 0.0007	< 0.0012	< 0.001	< 0.0026	**300**	**31.8**	1.54	*5.76*	--	< 10.5	< 0.0316	< 0.0316	< 0.0316	< 0.0316	< 0.0316	--	9.4	--	--	84.4	--	--	--	Delineated by 8-10 ft. interval at LSNS-SB04, located ~20 ft. to the east-southeast. Also delineated by 13-14 ft. interval at SB01 (Sample 003), located ˜20 ft. to the north-northeast.	**0**	FILL: clayey silt, very dark grayish Brown; little coarse to fine sand, trace coal pieces, trace brick fragments, stiff, moist.
NOS-MWW111	6.1-7.3	06/03/13	LaSalle	< 0.00074	< 0.0012	< 0.0011	< 0.0027	3.12	0.473	0.0442	0.0575	--	< 0.109	< 0.0328	< 0.0328	< 0.0328	< 0.0328	< 0.0328	--	*13.2*	--	--	63.4	--	--	--	Delineated by 8-10 ft. interval at LSNS-SB04, located ~20 ft. to the east-southeast. Also delineated by 13-14 ft. interval at SB01 (Sample 003), located ˜20 ft. to the north-northeast.	**0**	FILL: silty clay, dark grayish Brown; gray mottling, trace medium to fine sand, stiff, medium plasticity, moist (wet concrete fragments (6.5'-6.6').
NOS-MWW116	1-1.5	05/16/13	ComEd	< 0.00077	< 0.0013	< 0.0011	< 0.0028	30.8	4.64	1.38	**2.51**	--	< 0.991	--	--	--	--	--	--	*24.1*	--	--	*1,710*	--	--	--	Delineated by 9-10 ft. interval at CANS-SP25, located ~10 ft. to the east.	**0**	FILL: brick, coarse to fine sand, light Gray; little coarse to fine gravel, trace coal pieces, moist
NOS-MWW116 (N)	5.5-7	05/16/13	ComEd	< 0.00061	0.0018	< 0.00089	0.0121	0.224	0.0304	0.0153	0.082	--	< 0.101	--	--	--	--	--	--	*14.5*	--	--	21.2	--	--	--	Delineated by 9-10 ft. interval at CANS-SP25, located ~10 ft. to the east.	**18.3**	FILL: silty clay, dark Gray; brown mottling, trace coarse to fine sand, stiff, medium plasticity, moist, oil wetted (5.2'-5.9'), strong petroleum-like odor (5.2'-7.3'). Black to dark Gray, oil
NOS-SB103	1-2	08/30/13	ROW-Kingsbury	0.0161	0.0302	0.0753	0.228	32.86	5.19	0.456	**0.612**	--	< 0.478	0.154	< 0.0287	< 0.0287	0.119	0.035	--	11.5	--	--	*423*	--	--	--	Delineated by 12-14 ft. interval at SP-1, located ~30 ft. to the south.	**0**	FILL: fine sand, Black; little coarse to fine gravel, little coarse to medium sand, moist.
NOS-SB103	6-7	08/30/13	ROW-Kingsbury	0.113	0.0228	0.0911	0.252	2.833	0.514	< 0.105	0.135	--	< 0.418	< 0.0314	< 0.0314	< 0.0314	< 0.0314	< 0.0314	--	*20.1*	--	--	*843*	--	--	--	Delineated by 12-14 ft. interval at SP-1, located ~30 ft. to the south.	**729**	FILL: silty clay, dark olive Gray; little coarse to fine sand, trace fine gravel, very stiff, low plasticity, moist, strong petroleum-like odor moist to wet (6.4') brick and concrete
NOS-SB103	12.5-13.5	08/30/13	ROW-Kingsbury	< 0.00059	< 0.00097	< 0.00085	< 0.0021	< 0.0088	0.0146	< 0.0088	< 0.0088	--	< 0.0882	< 0.0264	< 0.0264	< 0.0264	< 0.0264	< 0.0264	--	*15.5*	--	--	15.6	--	--	--	Delineated by 12-14 ft. interval at SP-1, located ~30 ft. to the south.	**7**	CLAY (CL): silty, very dark grayish Brown; saturated seam (12.1 - 12.4') dark gray to olive Brown (2.5Y 4/3), gray mottling.
NOS-SB104	3-3.5	07/02/13	OTVW	< 0.00077	< 0.0013	< 0.0011	< 0.0028	7.98	0.859	0.291	0.277	--	--	< 0.0301	< 0.0301	< 0.0301	< 0.0301	< 0.0301	6.5	12.2	77.5	51,500	295	*7,300*	--	0.6	Delineated by 7-9 ft. interval at NOS-SB105, located ~30 ft. to the northeast.	**0**	FILL: silt, dark yellowish Brown; little fine sand, trace coarse to medium sand. trace coarse to fine gravel, trace slag, trace coal fines.
NOS-SG14	0.6-1.4	08/27/13	ROW-Hobbie	< 0.0006	< 0.00099	< 0.00088	< 0.0022	31	4.18	< 0.185	< 0.185	--	< 0.37	*53.7*	< 2.77	*53.7*	< 2.77	< 2.77	--	*13.3*	--	--	207	--	--	--	Delineated by 6-8 ft. interval at City-SP78, located ~5 ft. to the northeast.	**0**	FILL: coarse to fine sand, dark olive Gray; little coarse to fine gravel, little clay, trace silt, moist trace glass.
NOS-SG14	2-4	08/27/13	ROW-Hobbie	< 0.00087	< 0.0014	< 0.0013	< 0.0032	7.73	1.444	0.0497	0.132	--	< 0.107	< 0.0322	< 0.0322	< 0.0322	< 0.0322	< 0.0322	--	*14.7*	--	--	195	--	--	--	Delineated by 6-8 ft. interval at City-SP78, located ~5 ft. to the northeast.	**0**	FILL: silty clay, Gray; olive mottling, trace fine gravel, trace coarse to fine sand, low plasticity, moist.
NOS-SG15	2-3.3	09/13/13	ROW-Hobbie	< 0.00064	< 0.0011	< 0.00093	< 0.0023	114	**19**	0.408	**1.46**	--	< 2	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	--	*14.4*	--	--	173	--	--	--	Delineated by 22-24 ft. interval at City-SP76, located ~5 ft. to the north.	**0**	FILL: silty clay, very dark grayish Brown;, little coarse to fine sand, trace fine gravel, moist little brick fragments (2.9' - 4.4').
NOS-SG17	3-3.5	07/02/13	OTVW	< 0.00065	< 0.0011	< 0.00094	< 0.0024	36.1	3.7	0.372	**0.679**	--	--	0.138	< 0.0326	< 0.0326	0.0913	0.0467	3.8	*16.8*	85.7	48,000	250	*5,240*	--	1.2	Delineated by 7-9 ft. interval at NOS-SB105, located ~25 ft. to the west.	**0**	FILL: coarse to fine sand, very dark Brown; little silt, trace coarse to fine gravel, trace slag, trace coal fragments, trace brick fragments, moist.
NOS-SG18	4-4.5	07/02/13	OTVW	< 0.00073	< 0.0012	< 0.0011	< 0.0027	77.22	8.71	1.39	**1.84**	--	--	< 0.633	< 0.633	< 0.633	< 0.633	< 0.633	5.7	*26.4*	754	*124,000*	*1,290*	595	--	5.8	Delineated by 7-9 ft. interval at NOS-SB105, located ~25 ft. to the northwest.	**0**	FILL: coarse to fine sand, very dark Brown; little fine gravel, trace coal fragments, wet.
NOS-SG9	2-3.3	05/29/13	ROW-Crosby	< 0.00082	< 0.0014	< 0.0012	< 0.003	35.7	4.69	1.53	**2.89**	--	< 0.241	< 0.0362	< 0.0362	< 0.0362	< 0.0362	< 0.0362	--	*15.7*	--	--	29.6	--	--	--	Delineated by 2-3 ft. interval at City-SP84, located 5 ft. to the west.	**0**	FILL: silty clay, dark grayish Brown; trace medium to fine sand, trace coal fragments, trace brick fragments, stiff, medium plasticity, moist.
NOS-SS104	0.9-1.4	05/20/13	ComEd	< 0.0009	< 0.0015	< 0.0013	< 0.0033	1.534	0.1319	0.392	**0.448**	--	< 0.094	--	--	--	--	--	--	9.5	--	--	*522*	--	--	--	Delineated by 5.5-7.5 interval at NOS-MWW102, located ~ 25 ft. to the west.	**0**	FILL: coarse to fine sand, Black; little slag, trace brick, dry.
NOS-SS109	1-1.5	05/17/13	ComEd	*6.43*	*16.3*	< 0.138	9.96	**676**	**51.1**	176	*212*	--	< 7.27	--	--	--	--	--	--	8	--	--	119	--	--	--	Delineated by 29-31 ft. interval at CENS-SP43, located ~40 ft. to the west-southwest	**34**	FILL: silt, very dark Gray; little fine sand, trace fine gravel, trace clay, trace coal fragments, moist, strong petroleum-like odor.
NOS-SS112	0.4-0.9	05/17/13	ComEd	0.0276	0.0173	0.0387	0.104	0.458	0.0553	0.0684	0.175	--	< 0.0928	--	--	--	--	--	--	*21.4*	--	--	*3,170*	--	--	--	Delineated by 18-20 ft. interval at CENS-SP07, located ~25 ft. to the north-northwest.	**0**	FILL: coarse to fine sand, very dark Gray; some slag pieces, trace coarse to fine gravel, dry.
NS9901	8-10	12/07/99	ComEd	< 0.006	< 0.006	< 0.006	< 0.018	102	11	< 0.406	**0.65**	--	< 0.406	--	--	--	--	--	--	*14*	42	34,500	22	567	--	< 0.31	Delineated by 20-22 ft. interval at NS9903, located ~50 ft. to the north-northwest.	**66**	SANDY LEAN CLAY: Dark grey, mottled to strong brown, with trace coal tar residual sheens to 10 ft. Strong odor and heavy staining.
NS9904	18-20	12/08/99	ComEd	*26*	*69*	< 1	73	**1,543**	**63**	165	*6,340*	--	4.41	--	--	--	--	--	--	*14*	33	20,700	179	468	--	20.2	Delineated by 20-22 ft. interval at NS9903, located ~40 ft. to the west.	**120.5**	SANDY LEAN CLAY: Gray clay with black free-phase product from 18 ft.-24 ft.,Increased clay content with depth. Strong odor and heavy staining.
NS9905	5-7	12/08/99	ComEd	*6.4*	*45*	4.3	11	**684**	**29**	< 2.2	*55*	--	< 2.2	--	--	--	--	--	--	5.3	< 17	10,900	62	1,090	--	67.9	Delineated by 12-+14 ft. interval at MWW/P114, located~ 25 ft. to the southeast.	**174.4**	SANDY LEAN CLAY: Stained Black with 15% small gravel, heavy free phase prodict throughought interval. Sandy interval at 5 ft. Strong odor and heavy staining.

Table 2: Vertical Extent Evaluation of Analytical Results
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

Location	Depth (feet)	Sample Date	Parcel	BTEX Benzene (mg/kg)	BTEX Ethylbenzene (mg/kg)	BTEX Toluene (mg/kg)	BTEX Xylenes, Total (mg/kg)	TPAH TPAH (15) (mg/kg) [1,2]	B(a)P-TEQ B(a)P-TEQ (mg/kg) [5]	PAH 2-Methylnaphthalene (mg/kg)	PAH Naphthalene (PAH) (mg/kg)	SVOC 3,3-Dichlorobenzidine (mg/kg)	SVOC Dibenzofuran (mg/kg)	PCBs PCB, Total (mg/kg)	PCBs PCB-1242 (mg/kg)	PCBs PCB-1248 (mg/kg)	PCBs PCB-1254 (mg/kg)	PCBs PCB-1260 (mg/kg)	Metals Antimony, Total (mg/kg)	Metals Arsenic, Total (mg/kg) [3]	Metals Copper, Total (mg/kg)	Metals Iron, Total (mg/kg)	Metals Lead, Total (mg/kg)	Metals Manganese, Total (mg/kg)	Metals Thallium, Total (mg/kg)	Cyanide Cyanide, Total (mg/kg)	Description of Extent Evaluation	PID Response	Summary of Boring Log Observation at Sample Interval
Residential Soil SL:				*1.2*	*5.8*	*818*	*260*	*NS*	*NS*	*240*	*3.8*	*1.2*	*73*	*1*	*0.23*	*0.23*	*0.24*	*0.24*	*31*	*13*	*3,100*	*55,000*	*400*	*1,800*	*0.78*	*78*			
Exponent City of Chicago Soil Background 95th Percentile Concentrations [4]:				NS	NS	NS	NS	**132**	**15.5**	NS	**0.352**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
NS9906	4-6	12/08/99	ComEd	*12*	*37*	8.2	28	**171**	**20**	9.49	*58*	--	< 1.8	--	--	--	--	--	--	8.8	20	14,200	17	120	--	8.95	Delineated by 12-14 ft. and 28-30 ft. interval at City-SP60, located~50 ft. to the south.	**19.6**	CLAYEY SAND: Stained black with 20% small gravel, heavy free phase product throughout interval (FILL). Strong odor and heavy staining.
NS9906	8-10	12/08/99	ComEd	*12*	*11*	< 0.1	9.5	3.5	0.41	4.31	*15*	--	< 0.406	--	--	--	--	--	--	10	26	24,600	22	308	--	< 0.31	Delineated by 12-14 ft. and 28-30 ft. interval at City-SP60, located~50 ft. to the south.	**41.6**	SANDY LEAN CLAY: Gray mottled with light brown, with angular fine to coarse gravel. No odor/no staining.
NS9908	12-14	12/09/99	ComEd	*29*	*66*	80	130	**484**	**29**	*416*	*222*	--	26.3	--	--	--	--	--	--	*22*	17	8,590	69	319	--	< 0.35	Delineated by 18-20 ft. and 28-30 ft. intervals at City-SP68, located ~25 ft. to the east	**31.9**	GRAVELY LEAN CLAY: Black, with gravel to 2 in. diameter debris.
SB05-001	1-2	09/01/05	Division_H	< 0.0079	< 0.0079	< 0.0079	< 0.024	**201**	**28**	1.4	*4.6*	< 0.46	0.38	--	--	--	--	--	< 2.6	*16*	33	--	49	--	< 1.3	48	Delineated by 8-9 ft. interval at SB11, located 30 ft. to the south-southeast. Also delineated by 12-14 ft. interval at SP-6, located ~30 ft. to the north.	**0**	FILL: moderate yellowish Brown; silt, some medium to fine sand, little brick, trace cinders, trace fine gravel, dense, moist.
SB05-002	4-5	09/01/05	Division_H	< 0.89	*34*	1.2	63	**1,458**	**49**	*340*	*330*	< 0.79	13	--	--	--	--	--	< 4.5	7.9	28	--	72	--	< 2.2	35	Delineated by 8-9 ft. interval at SB11, located 30 ft. to the south-southeast. Also delineated by 12-14 ft. interval at SP-6, located ~30 ft. to the north.	**119**	FILL: moderate yellowish Brown; silt, some medium to fine sand, little brick, trace cinders, trace fine gravel, dense, moist\, wood chips. Tar saturated/coated.
SB05-003	5-6	09/01/05	Division_H	< 0.027	< 0.0047	< 0.0047	< 0.014	3.5	0.14	0.57	**2.1**	< 0.39	< 0.2	--	--	--	--	--	< 2.2	*17*	40	--	--	--	*1.3*	< 0.3	Delineated by 8-9 ft. interval at SB11, located 30 ft. to the south-southeast. Also delineated by 12-14 ft. interval at SP-6, located ~30 ft. to the north.	**0**	FILL: olive gray; silty clay with orange mottling, trace coarse to fine sand, trace wood, medium stiff to very stiff, low plasticity, wet.
SB06-001	2-3	09/01/05	Division_H	< 0.009	< 0.009	< 0.009	< 0.027	58.1	5.4	1.4	*9.5*	< 2.6	1.6	--	--	--	--	--	--	*13*	61	--	130	--	< 1.5	*180*	Delineated by 12-14 ft. interval at SP-6, located ~40 ft. to the south-southwest.	**0**	FILL: dark yellowis brown; medium to fine sand, trace fine gravel, trace brick, some orange mottling, moist to wet.
SB06-003	10-11	09/01/05	Division_H	< 0.0055	< 0.0055	< 0.0055	< 0.017	9.9	0.53	< 0.2	0.05	< 0.38	< 0.2	--	--	--	--	--	< 2.2	4.7	32	--	18	--	*1.1*	< 0.3	Delineated by 12-14 ft. interval at SP-6, located ~40 ft. to the south-southwest.	**0**	FILL: olive gray/silty clay, with orange mottling, trace coarse to fine sand, hard, low plasticity, moist.
SB10-001	2-3	09/01/05	Division_H	< 0.011	< 0.011	< 0.011	< 0.031	64.3	13.4	1.4	*5.5*	< 0.42	0.48	--	--	--	--	--	< 2.4	6.7	13	--	--	--	< 1.2	*94*	Delineated by 7-8 ft. interval at SB12, located ~30 ft. to the east-northeast.	**0**	FILL: moderate yellowish brown, coarse to fine sand, trace brick, loose, moist, trace crushed stone.
SB10-002	6-7	09/01/05	Division_H	< 0.0059	< 0.0059	< 0.0059	< 0.018	< 0.03	0.07	< 0.21	< 0.03	< 0.4	< 0.21	--	--	--	--	--	< 2.4	*14*	38	--	22	--	< 1.2	< 0.31	Delineated by 7-8 ft. interval at SB12, located ~30 ft. to the east-northeast.	**0**	FILL: olive gray/silty clay, with orange mottling, trace coarse to fine sand, very stiff to hard, low plasticity, moist.
SP-13	12-14	01/28/11	Division_H	< 0.00064	< 0.00071	< 0.00063	< 0.00078	0.31	0.036	--	< 0.0072	--	--	--	--	--	--	--	0.45	*14*	45	24,000	18	400	0.65	--	Delineated by 12-14 interval at SP-14, located ~40 ft. to the south-southeast. This is a minor exceedance of arsenic, and the SP-14 sample at the same depth is clean.	**NA**	FILL: Brown/gray, clay.
SP-17	7-9	01/28/11	Division_H	0.13	0.44	0.029	0.46	**236**	**20**	1.6	*9.4*	< 0.15	1.5	< 0.0078	< 0.0063	< 0.007	< 0.0064	< 0.0067	0.34	5	250	7,300	31	120	< 0.38	9.1	Delineated by 12-14 ft. interval at SP-16, located ~50 ft. to the north-northwest.	**NA**	FILL: black sandy clay with coal pieces, odor.
SP-17	12-14	01/28/11	Division_H	0.16	*8.5*	< 0.037	2.6	76.1	1.6	--	*11*	--	--	--	--	--	--	--	0.56	*17*	71	27,000	29	320	< 0.34	--	Delineated by 12-14 ft. interval at SP-16, located ~50 ft. to the north-northwest.	**NA**	FILL: Brown/gray ,clay.
SP-2E	1-3	03/03/11	Halsted	--	--	--	--	**--**	**--**	--	--	--	--	--	--	--	--	--	--	--	--	--	*430*	--	--	--	Delineated by 12-14 ft. interval at SP-1, located ~50 ft. to the northeast.	**NA**	No boring log available.
SP-2E	7-9	03/03/11	Halsted	--	--	--	--	**--**	**--**	--	--	--	--	--	--	--	--	--	--	--	--	--	*1,700*	--	--	--	Delineated by 12-14 ft. interval at SP-1, located ~50 ft. to the northeast.	**NA**	No boring log available.
SP-2S	7-9	03/03/11	Halsted	--	--	--	--	**--**	**--**	--	--	--	--	--	--	--	--	--	--	--	--	--	*7,100*	--	--	--	Delineated by 12-14 ft. interval at SP-2, located ~40 ft. to the south-southwest.	**NA**	No boring log available.
SP-2W	7-9	03/03/11	Halsted	--	--	--	--	**--**	**--**	--	--	--	--	--	--	--	--	--	--	--	--	--	*550*	--	--	--	Delineated by 12-14 ft. interval at SP-2, located ~50 ft. to the south.	**NA**	No boring log available.
SS02	1-3	05/23/12	Halsted	< 0.0047	< 0.008	0.017	< 0.0043	63.7	7.4	--	0.12	--	--	*1.3*	< 0.03	< 0.036	*1.3*	< 0.045	--	9.6	--	--	190	--	--	--	Delineated by 12-14 ft. interval at SP-16, located ~35 ft. to the northeast.	**0**	Gravelly SAND: Little sand and brick, trace concrete, dark brown, saturated at 6-8'.
SS03	4-6	05/23/12	Halsted	< 0.0038	< 0.0064	< 0.0058	< 0.0035	**141**	**17**	--	**1**	--	--	< 0.0035	< 0.0061	< 0.0073	< 0.004	< 0.0091	--	7.4	--	--	180	--	--	--	Delineated by 5-6 ft. interval at SB02, located ~35 ft. to the southeast. Also delineated by 13-14 ft. interval at SB01, located ~35 ft. to the south.	**0**	Gravelly SAND: Little sand and brick, trace concrete, dark brown, saturated at 6-8'.
SS04	4-6	05/23/12	Halsted	< 0.0041	< 0.0069	0.024	0.047	**467**	**50**	--	*6.8*	--	--	< 0.0036	< 0.0062	< 0.0074	< 0.0041	< 0.0092	--	6.8	--	--	94	--	--	--	Delineated by 12-14 ft. interval at SP-14, located ~50 ft. to the northwest.	**0**	Gravelly SAND: Little sand and brick, trace concrete, dark brown, saturated at 6-8'.
SS05	1-3	05/23/12	Halsted	< 0.0036	< 0.0061	0.02	0.039	55.8	6.7	--	0.19	--	--	< 0.0035	< 0.0059	< 0.0071	< 0.0039	< 0.0089	--	8.4	--	--	*520*	--	--	--	Delineated by 12-14 ft. samples at SP-9, located ~50 ft. to the northeast.	**0**	Gravelly SAND: Little sand and brick, trace concrete, dark brown, saturated at 6-8'.
SS05	4-6	05/23/12	Halsted	< 0.0037	< 0.0063	< 0.0057	< 0.0034	**385**	**42**	--	**1.9**	--	--	< 0.0038	< 0.0066	< 0.0079	< 0.0043	< 0.0098	--	*200*	--	--	*8,100*	--	--	--	Delineated by 12-14 ft. samples at SP-9, located ~50 ft. to the northeast.	**0**	Gravelly SAND: Little sand and brick, trace concrete, dark brown, saturated at 6-8'.
SS06	4-6	05/23/12	Division_H	0.025	< 0.012	0.11	0.23	**192**	**38**	--	*4.6*	--	--	< 0.0044	< 0.0075	< 0.009	< 0.0049	< 0.011	--	5.1	--	--	37	--	--	--	Delineated by 7-8 ft. interval at SB12, located ~20 ft. to the northeast.	**0**	Gravelly SAND to Silty CLAY: Little sand and brick, trace concrete, dark brown, saturated at 6-8'.
SS07	4-6	05/23/12	Halsted	< 0.0036	< 0.0061	0.012	0.029	118	13	--	**0.79**	--	--	< 0.0036	< 0.0061	< 0.0073	< 0.004	< 0.0091	--	12	--	--	*1,400*	--	--	--	Delineated by 12-14 ft. interval at SP-10, located ~50 ft. to the east.	**0**	Gravelly SAND: Little sand and brick, trace concrete, dark brown, saturated at 6-8'.
Sample Locations Where Vertical Extent is Not Fully Defined - Further Investigation Unnecessary																													
CENS-SB07-001	18-20	07/01/01	ComEd	0.1	< 0.07	< 0.07	< 0.07	2.7	0.2	< 0.4	**0.7**	< 0.8	< 0.4	--	--	--	--	--	< 2	8.6	38.2	--	16.6	--	*1.2*	< 0.37	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	CLAY: gray/tan, moist, very stiff, medium plastic trace fine gravel.
CENS-SP03-001	8-10	07/01/01	ComEd	< 0.004	< 0.004	< 0.004	< 0.004	6	0.6	< 0.4	< 0.4	< 0.8	< 0.4	--	--	--	--	--	< 2.4	*17.1*	40.8	--	17.8	--	*0.8*	< 0.43	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	CLAY: light to olive brown, mottled orange/brown, moist, stiff, fine to coarse grain sand.
CENS-SP04-003	10-12	07/01/01	ComEd	< 0.09	0.2	< 0.09	< 0.09	71.3	6	2	**3**	< 0.9	2	--	--	--	--	--	< 2.2	*14.4*	60.8	--	69.5	--	0.5	24.8	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**27.9**	CLAY: soft light gray to olive brown, mottled orange/brown, moist, medium plastic, with fine to coarse sand with silt.
CENS-SP05-001	10-12	07/01/01	ComEd	< 0.005	< 0.005	< 0.005	< 0.005	< 0.4	0.2	< 0.4	< 0.4	< 0.8	< 0.4	--	--	--	--	--	< 2.1	*18.5*	38.6	--	16.3	--	0.49	< 0.48	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	CLAY: light gray to olive brown, mottled organe/brown, dry, stiff, medium plastic, with fine to coarse sand.
City-SP58-003	34-36	11/01/02	ROW-Kingsbury	< 0.0083	< 0.0083	< 0.0083	< 0.0083	0.29	0.07	--	0.043	--	--	--	--	--	--	--	1.2	10	27	--	18	--	*1.5*	--	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	Silty CLAY: gray, wet, medium to high plasticity, trace fine gravel.
City-SP72-002	10-12	11/01/02	ROW-Kingsbury	< 0.012	< 0.012	< 0.012	0.036	4.9	0.42	--	**1.8**	--	--	--	--	--	--	--	1.3	12	37	--	100	--	*1.1*	--	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	Silty CLAY: gray, orange mottling, moist, medium plasticity, some fine sand.

Table 2: Vertical Extent Evaluation of Analytical Results
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

				BTEX	BTEX	BTEX	BTEX	TPAH	B(a)P-TEQ	PAH	PAH	SVOC	SVOC	PCBs	PCBs	PCBs	PCBs	PCBs	Metals	Metals	Metals	Metals	Metals	Metals	Metals	Cyanide			
Location	Depth (feet)	Sample Date	Parcel	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes, Total (mg/kg)	TPAH (15) (mg/kg) [1,2]	B(a)P-TEQ (mg/kg) [5]	2-Methylnaphthalene (mg/kg)	Naphthalene (PAH) (mg/kg)	3,3-Dichlorobenzidine (mg/kg)	Dibenzofuran (mg/kg)	PCB, Total (mg/kg)	PCB-1242 (mg/kg)	PCB-1248 (mg/kg)	PCB-1254 (mg/kg)	PCB-1260 (mg/kg)	Antimony, Total (mg/kg)	Arsenic, Total (mg/kg) [3]	Copper, Total (mg/kg)	Iron, Total (mg/kg)	Lead, Total (mg/kg)	Manganese, Total (mg/kg)	Thallium, Total (mg/kg)	Cyanide, Total (mg/kg)	Description of Extent Evaluation	PID Response	Summary of Boring Log Observation at Sample Interval
Residential Soil SL:				*1.2*	*5.8*	*818*	*260*	*NS*	*NS*	*240*	*3.8*	*1.2*	*73*	*1*	*0.23*	*0.23*	*0.24*	*0.24*	*31*	*13*	*3,100*	*55,000*	*400*	*1,800*	*0.78*	*78*			
Exponent City of Chicago Soil Background 95th Percentile Concentrations [4]:				NS	NS	NS	NS	**132**	**15.5**	NS	**0.352**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
City-SP76-002	22-24	11/01/02	ROW-Hobbie	< 0.0068	< 0.0068	< 0.0068	< 0.0068	1.5	0.14	--	0.098	--	--	--	--	--	--	--	< 3.4	11	31	--	27	--	*1.3*	--	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	Silty CLAY: brown, low plasticity, trace gravel. Becomes light brown/gray, medium plasticity.
City-SP80-003	10-12	11/01/02	ROW-Crosby	< 0.0068	< 0.0068	< 0.0068	< 0.0068	< 0.03	0.07	--	< 0.03	--	--	--	--	--	--	--	< 2.3	6.4	28	--	15	--	*1.1*	--	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	Silty CLAY: gray, low plasticity, trace sand and gravel.
City-SP85-003	22-24	11/01/02	ROW-Kingsbury	< 0.0091	< 0.0091	< 0.0091	< 0.0091	0.39	0.067	--	0.031	--	--	--	--	--	--	--	< 3.3	9.6	30	--	18	--	*1.3*	--	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	Silty CLAY: gray, wet, high plasticityt, traces coarse to fine gravel.
City-SP87-003	22-24	11/01/02	ROW-Kingsbury	< 0.0088	< 0.0088	< 0.0088	< 0.0088	0.509	0.077	--	0.057	--	--	--	--	--	--	--	< 7.8	9.7	30	--	18	--	*1.2*	--	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	Silty CLAY: gray, moist, high plasticity, trace coarse to fine sand and gravel.
NOS-MWP103	6-6.8	03/18/14	OTVW	< 0.00089	< 0.0015	< 0.0013	< 0.0032	42.12	3.81	0.372	**0.421**	--	--	< 0.0309	< 0.0309	< 0.0309	< 0.0309	< 0.0309	3.1	*24.7*	231	27,300	242	417	--	0.58	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	FILL: coarse to fine sand, very dark Brown; little brick, little coal pieces, dense, dry.
NOS-SB104 (N)	10.1-11.1	07/02/13	OTVW	< 0.00073	< 0.0012	< 0.0011	< 0.0027	**256**	**33.2**	1.27	**3.12**	--	--	< 0.0306	< 0.0306	< 0.0306	< 0.0306	< 0.0306	1	*17*	51	30,800	250	428	--	18	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	FILL: coarse to fine sand, very dark grayish Brown; little coarse to fine gravel, little clay, wet.
NOS-SG7	1-2.2	05/21/13	Division	< 0.0011	< 0.0018	< 0.0016	< 0.004	6.46	0.884	0.136	0.166	--	--	< 0.0289	< 0.0289	< 0.0289	< 0.0289	< 0.0289	0.98	*27*	126	*92,000*	64.3	302	--	12.7	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	FILL: coarse to fine sand, Black; little slag pieces, little coal pieces, trace fine gravel, moist.
NOS-SG8	2-3.4	05/29/13	ROW-Crosby	< 0.00073	< 0.0012	< 0.0011	< 0.0027	46.23	7.84	0.291	**0.893**	--	< 0.423	< 0.0317	< 0.0317	< 0.0317	< 0.0317	< 0.0317	--	*22.9*	--	--	*713*	--	--	--	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	FILL: silt, Black; little medium to fine sand, trace brick fragments, moist rock fragment.
NOS-SS105	1-1.5	05/20/13	ComEd	< 0.00053	< 0.00088	< 0.00078	< 0.0019	21.22	3.47	< 0.191	0.218	--	< 0.0957	--	--	--	--	--	--	*14.5*	--	--	23.8	--	--	--	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	FILL: silty clay, light olive brown; little coarse to fine sand, trace fine gravel, hard, low plasticity, moist.
SG16	2.0-2.7	08/07/14	ROW-Kingsbury	< 0.0015	< 0.0013	< 0.0013	< 0.004	7.71	0.954	< 0.0388	0.0539	--	< 0.171	0.468	< 0.0291	*0.468*	< 0.0291	< 0.0291	--	6.3	--	--	144	--	--	--	Not Delineated - no investigation required as inorganic exceedance occurs independent of BTEX and PAH exceedances. Will be managed in Risk Assessment.	**0**	FILL: silt, grayish Brown; little coarse to fine gravel, little fine sand, trace clay, non-plastic, dry, trace brick fragments
Sample Locations Where Vertical Extent is Not Fully Defined - Further Investigation Required																													
CENS-SB05-001	26-27	07/01/01	ComEd	*730*	*758*	*895*	*860*	**14,967**	**233**	*7,670*	*8,680*	< 1.6	*137*	--	--	--	--	--	--	0.023	--	--	2.88	--	--	--	Not delineated, further investigation required.	**361**	CLAY: black, soft, medium plastic, wood, some silt, trace fine gravel, odor.
CENS-SP13-002	8-9	07/01/01	ComEd	*12*	*35*	29	120	**8,973**	**650**	*350*	*1,600*	< 4	21	--	--	--	--	--	< 2.3	10.6	12.1	--	35.7	--	< 0.75	2.8	Not delineated, further investigation required.	**108**	FILL: grades to rubble, brick fragments with coarse sand, wood fragments.
CENS-SP14-002	9-10	07/01/01	ComEd	*10*	*17*	0.1	10	**210**	12	75	*230*	< 0.9	3	--	--	--	--	--	< 2.2	9.7	35.6	--	26.5	--	0.45	5.9	Not delineated, further investigation required.		
CENS-SP17-001	4-6	07/01/01	ComEd	< 0.08	0.1	< 0.08	1	37.8	7	3	*11*	< 0.8	1	--	--	--	--	--	< 1.9	11.6	29.6	--	77.4	--	< 0.29	24.2	Not delineated, further investigation required.	**0**	CLAY: light gray to olive brown, mottled orange/brown, dry, stiff, with coarse to fine sand, with silt.
CENS-SP21-001	7-8	07/01/01	ComEd	*21*	*14*	< 0.08	11	**250**	**18**	120	*170*	< 0.8	3	--	--	--	--	--	< 2.2	7.4	33.2	--	44.1	--	0.42	1	Not delineated, further investigation required.	**41.2**	CLAY: light brownish gray to olive brown, mottled orange/brown, highly plastic, with fine to coarse sand with silt. Coal tar in fractures.
CENS-SP21-002	15-16	07/01/01	ComEd	*190*	*14*	130	74	128	3	17	*100*	< 0.8	< 0.4	--	--	--	--	--	< 2	5.3	32.7	--	15.1	--	*2.5*	< 0.95	Not delineated, further investigation required.	**21.9**	CLAY: light gray to olive brown, mottled orange/brown, dry, stiff, with coarse to fine sand, with silt.
CENS-SP28-001	7-8	07/01/01	ComEd	*3*	*9*	< 0.2	5	**251**	**19**	70	*81*	< 1	4	--	--	--	--	--	< 3	10.3	42.3	--	205	--	< 0.3	9.9	Not delineated, further investigation required.	**214**	FILL: yellow and orange sand, with fine gravel to coarse sand. Coal tar stained.
CENS-SP28-002	12-15	07/01/01	ComEd	*31.6*	*130*	0.89	98.2	**1,004**	**58**	--	*766*	--	--	--	--	--	--	--	--	0.033	0.081	--	0.168	--	--	2.61	Not delineated, further investigation required.	**280**	FILL: yellow and orange sand, with fine gravel to coarse sand. Saturated with coal tar.
CENS-SP28-003	22-24	07/01/01	ComEd	*16*	*52*	7.58	48.8	**843**	**55.6**	--	*463*	--	--	--	--	--	--	--	--	0.052	0.094	--	0.38	--	--	0.74	Not delineated, further investigation required.	**24**	FILL: black asphalt and white crushed rock, with fine yellow and orange sand, with red brick fragements, with fine gravel, coal tar stained.
CENS-SP29-004	23-24	07/01/01	ComEd	*130*	0.4	65	1	< 0.4	0.2	< 0.4	< 0.4	< 0.8	< 0.4	--	--	--	--	--	< 2	8.2	31.8	--	14.4	--	< 1	2.6	Not delineated, further investigation required.	**20.1**	CLAY: tan/gray, moist, stiff, medium plastic, trace fine gravel. Faint oil odor/black staining.
CENS-SP49-002	17-19	07/01/01	ComEd	*69*	*43*	48	86	**148**	6	110	*150*	< 0.8	3	--	--	--	--	--	< 1.8	4.6	28.8	--	10.5	--	0.29	< 0.52	Not delineated, further investigation required.	**148**	CLAY: gray/brown, very stiff, medium plastic, trace fine gravel, trace fine to medium sand. Strong odor.
NS9909	5-7	12/10/99	ComEd	*7.1*	5.7	0.34	2.6	**166**	**15.6**	11.5	*57*	--	0.979	--	--	--	--	--	--	11	34	27,000	213	738	--	26	Not delineated, further investigation required.	**28.2**	SANDY LEAN CLAY: Grayish brown with wood chips and brick debris. Coarse-grained sand and medium to strong odor, trace to moderate sheen.

Notes:
Italic = *Value exceeds Residential SL*
BOLD = Value exceeds 95th Percentile or B(a)P-TEQ concentratio
-- = Analysis not performed
< = Concentration is less than reported limit
(N) = Normalized sample locations created from combining parent and field duplicate samples following EPA protocol
NS = No standard
R = Result rejected during validation
SL = Screening level
MS/MSD = Matrix spike/matrix spike duplicate
mg/kg = Milligrams per kilogram

B(a)P TEQ = Benzo(a)pyrene Toxicity Equivalent Quotient
BTEX = Benzene, Toluene, Ethylbenzene and Xylene
PAH = Polycyclic aromatic hydrocarbons
PCBs = Polychlorinated biphenyls
RNA = Remediation by natural attenuation (lab and field)
SVOC = Semivolatile organic compound
VOC = Volatile organic compound
PHC = Petroleum Hydrocarbon

Individual background PAH SLs shown for comparison purposes only. Results not highlighted on table.

Screening levels as presented in the Multi-Site Risk Assessment Framework Addendum Revision 6 (Exponent, July 2017).

SLs used on this table are 10-6 risk value.

1. The following rules apply to the summation of Total PAH (15) calculated by O'Brien & Gere Engineers, Inc.:
   a. Where no detections were observed, the maximum individual reported detection limit is presented.
   b. Where detections were observed, ½ the reported detection limit for non-detects was used in the summation
2. The list of Total PAH (15) is as follows: Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(ghi)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Phenanthrene and Pyrene.
3. Arsenic compared to Chicago IEPA Background level of 13 mg/kg
4. Per USEPA approval January 2016, background PAH values presented were calculated using USEPA's ProUCL version 5.0 software to perform the statistical assessment (95th Percentile) of the USGS (2003) background soil dataset for the City of Chicago (Exponent, 2015).

5. B(a)P TEQ is calculated as the sum of the (seven) carcinogenic PAH concentrations multiplied by their respective relative potency factor.
   a. For B(a)P TEQ, the seven carcinogenic PAHs and their relative potency factors are Benzo(a)anthracene (0.1), Benzo(a)pyrene (1), Benzo(b)fluoranthene (0.1), Benzo(k)fluoranthene (0.01), Chrysene (0.001), Dibenz(a,h)anthracene (1) and Indeno(1,2,3-cd)pyrene (0.1).

Table 3: Tabulated Soil Sampling Results for GS-4 from GaiaTech Report
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

				BTEX	BTEX	BTEX	BTEX	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	Metals	Metals
Location	Depth (feet)	Sample Date	Parcel	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes, total (mg/kg)	Acetone (mg/kg)	n-Butylbenzene (mg/kg)	sec-Butylbenzene (mg/kg)	Isopropylbenzene (mg/kg)	p-Isopropyltoluene (mg/kg)	Naphthalene (mg/kg)	n-Propylbenzene (mg/kg)	Styrene (mg/kg)	1,2,3-Trichlorobenzene (mg/kg)	1,2,3-Trimethylbenzene (mg/kg)	1,2,4-Trimethylbenzene (mg/kg)	1,3,5-Trimethylbenzene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)	Chrysene (mg/kg)	Dibenz(a,h)anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno(1,2,3-cd)pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)	Arsenic (mg/kg)	Lead (mg/kg)
		Residential Soil SL:		1.2	5.8	818	260	61000	108	145	268	NS	3.8	264	867	63	293	219	182	3600	3600	18000	1.1	0.11	1.1	11	1800	110	0.11	2400	2400	1.1	3.8	18000	1800	13.0	400
GS-4	0.5-2.5	5/15/2014	Division	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13	230
GS-4	7-8	5/15/2014	Division	0.020	0.029	<0.10	<0.075	<1.8	0.055	<0.025	0.13	0.18	0.31	0.033	<0.025	<0.025	0.27	0.13	0.029	27	18	43	*83*	*28*	*19*	5.1	8.1	31	*3.4*	54	39	*7*	*16*	120	84	NA	NA

Notes:
Italic = Value exceeds Residential SL
< = Concentration is less than reported limit
NA = Analysis not performed
SL = Screening Level
All results in miligrams per kilogram.

BTEX = benzene, toluene, ethylbenzene, and xylene
PAH = polycyclic aromatic hydrocarbon
SVOC = semivolatile organic compound
VOC = volatile organic compound

Results transcribed from Table 1 of the Gaia Tech Site Investigation Report
Arsenic compared to Chicago Illinois Environmental Protection Agency Background level of 13.0 mg/kg
Screening levels as presented in the Multi-Site Risk Assessment Framework Addendum Revision 6 (Exponent, July 2017).

Table 4: Vapor Intrusion Evaluation Summary
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

Building	Parcel	Current Point along the Vapor Intrusion Matrix	Previous Remedial Investigation Summary	Proposed Action
Control Building	ComEd	12	Indoor air exceedances detected in sump headspace.	Sample - indoor air
Oil Pump House 1 & 2	ComEd	13	MGP residuals observed within 30 feet of buildings, no soil gas collected in or around building.	Sample - sub-slab
Maintenance Building	ComEd	14	MGP residuals within 30 feet, soil gas exceedances (NOS-SG3), no exceedances in sub-slab gas sample NOS-SG3A (three rounds).	No additional sampling proposed.
Old Town Village West	Old Town Village West	14	No MGP residuals observed within 30 feet. Single exceedances of chloroform (SG-17 & SG-18) & naphthalene (SG-18) reported during three rounds of sub-slab sampling. BLRA concluded exceedances were at the low end of the cancer risk management range ($6x10^{-6}$ and $1x10^{-6}$) and below noncancer hazards.	No additional sampling proposed.

Notes:
1) Vapor intrusion was evaluated consistent with the United States Environmental Protection Agency approved Vapor Intrusion Decision Matrix (January 15, 2016) presented in Appendix
2) BLRA - Baseline Risk Assessment

Table 5: Supplemental Remedial Investigation Summary and Rationale
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

Boring/Well Name	Rationale	Anticipated Delineation Sampling Depth[2] (feet bgs)	Anticipated Boring Terminus[1] (feet bgs)	COPCs to be Analyzed
NOS-SB107	Provide vertical delineation near non-delineated borings NS9909 and CENS-SP28 on the ComEd Parcel.	26	40	PVOCs (from Multi-Site RAF list), PAHs (from Multi-Site RAF list), 2-Methylnaphtlane, Dibenzofuran, Total Arsenic, Total Lead
NOS-SB108	Provide vertical delineation near non-delineated borings NS9909 and CENS-SP28 on the ComEd Parcel.	26	40	
NOS-SB109	Provide vertical delineation near non-delineated borings CENS-SP14, CENS-SP13, and CENS-SP17 on the ComEd Parcel.	12	32	
NOS-SB110	Provide vertical delineation near non-delineated borings CENS-SP13, CENS-SP17, B37, B38, and B39 on the ComEd Parcel.	12	32	
NOS-SB111	Provide vertical delineation near non-delineated borings CENS-SP49 and B30 on the ComEd Parcel.	22	40	
NOS-SB112	Provide vertical delineation near non-delineated boring CENS-SP21 on the ComEd Parcel.	26	40	
NOS-SB113	Provide vertical delineation near non-delineated boring CENS-SP21 and CENS-SP29 on the ComEd Parcel	26	40	
NOS-SB114	Provide vertical delineation near non-delineated boring CENS-SP29 and B21 on the ComEd Parcel.	26	40	
NOS-SB115	Provide vertical delineation near non-delineated boring CENS-SB05, B23, and B24 on the ComEd Parcel.	28	40	
NOS-SB116	Provide lateral delineation east of non-delineated boring NOS-MWP106 on West Hobbie Street right-of-way and delineation south of the ComEd Parcel.	6.5	25	PVOCs (from Multi-Site RAF list), PAHs (from Multi-Site RAF list), 2-Methylnaphtlane, Dibenzofuran, Total Arsenic, Total Lead, PCBs
NOS-SB117	Provide lateral delineation west of non-delineated boring NOS-MWP106 on West Hobbie Street right-of-way.	6.5	25	
NOS-SG19	Assess vapor intrusion in the Oil Pump House No. 1 on the ComEd Parcel.	NA	NA	PVOCs (from Multi-Site RAF list), naphthalene, and Site Specific List:1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Bromodichloromethane, Bromomethane, Carbon disulfide, Chloroethane, Chloroform, Chloromethane, Methyl Ethyl Ketone, Methylene Chloride, and Styrene.
NOS-SG20	Assess vapor intrusion in the Oil Pump House No. 2 on the ComEd Parcel.	NA	NA	
NOS-IA01	Assess indoor air quality on the occupied floor within the Control Buliding on the ComEd Parcel.	NA	NA	
NOS-AMB01	Assess outdoor ambient air quality outside the Control Building on the ComEd Parcel.	NA	NA	
NOS-SG14	Assess soil vapor potentail south of West Hobbie Street.	NA	NA	PVOCs (from Multi-Site RAF list), naphthalene, and Site Specific List:1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Bromodichloromethane, Bromomethane, Carbon disulfide, Chloroethane, Chloroform, Chloromethane, Methyl Ethyl Ketone, Methylene Chloride, and Styrene.
NOS-SG15	Assess soil vapor potentail south of West Hobbie Street.	NA	NA	
NOS-SG16	Assess soil vapor along the West Hobbie Street and North Kingsbury Street sewer utility.	NA	NA	
NOS-SG21	Assess soil vapor potential in relation to NOS-MWP106.	NA	8	
NOS-SG22	Assess soil vapor along the West Hobbie Street and North Kingsbury Street sewer utility.	NA	8	
NOS-MWW114	Assess groundwater quality up-gradient of the North Kingsbury Street sewer utility.	NA	NA	PVOCs (from Multi-Site list), PAHs (from Multi-Site list), 2-Methylnaphthalene, Dibenzofuran, Total Arsenic, Total Lead, Total Antimony, Available Cyanide, Phenol, and Styrene
NOS-MWW115	Assess groundwater quality up-gradient of the North Kingsbury Street sewer utility.	NA	NA	
NOS-MWW-KN	Assess groundwater along the N Kingsbury Street sewer.	NA	NA	
NOS-MWW-KS	Assess groundwater along the N Kingsbury Street sewer.	NA	NA	
NOS-MWW106	Assess groundwater quality south of W Hobbie Street sewer.	NA	NA	

Notes:

[1] - If observations of MGP residuals or elevated PID responses are made near the anticipated boring terminus, the boring should continue to a depth until at least four feet of MGP residuals or elevated PID responses are not observed.

[2] - If observations of MGP residuals or elevated PID responses are made near the anticipated delineation sampling depth, the sampling should occur at a depth below where MGP residuals or elevated PID responses are not observed.

If contingency borings are advanced, name boring location with the next availible three digit number in the project soil boring sequence. NOS-SBXXX.

MGP - manufactured gas plant
PAH - polycyclic aromatic hydrocarbon
PVOC - petroleum volatile organic compound
bgs - below ground surface
COPCs - constituents of potential concern
SVOC - semivolatile organic compound

Table 6: Sampling and Analysis Plan Summary
SSWP Addendum No. 1, Revision 2
North Station Former MGP Site Operable Unit 1
Chicago, IL
CERCLIS ID ILD982074775

Sample Type	Sample Frequency	Estimated Number of Samples per Event[1]	Parameter	Method	Field Duplicates[2] (1 extra volume)	MS/MSD[3] (2 extra volumes)	Equipment Blanks	Trip Blanks	TOTAL	Estimated No. of Containers	Container Type	Minimum Volume	Preservation (Cool All Samples to 4° ± 2°C Unless 'None' Indicated)	Holding Time from Sample Date
Soil														
Soil **ComEd Parcels**	1 Subsurface Sample from Delineation Depth 1 Subsurface Sample from Boring Terminus	(9 borings) 18	PVOCs[6]	5035/8260B	1	1	Equipment blanks will be collected at a frequency of 1 per soil or sediment sampling day with non-dedicated sampling equipment.	VOC trip blanks will accompany each cooler containing VOC samples.	19	19	Glass Vial (3/sample)	15 g	Methanol	14 days
			PAHs[5]	8270 SIM	1	1			19	19	Amber Glass	8 oz	--	14/40 days
			2-Methylnaphthalene and Dibenzofuran	8270C	1	1			19	19	Amber Glass	8 oz	--	14/40 days
			Total Arsenic and Total Lead	6020A/7471A	1	1			19	19	Plastic	8 oz	--	6 months
Soil **Off-Site Parcels**	1 Subsurface Sample from Delineation Depth 1 Subsurface Sample from Boring Terminus	(2 borings) 4	PVOCs[9]	5035/8260B	1	1			5	5	Glass Vial (3/sample)	15 g	Methanol	14 days
			PAHs[8]	8270 SIM	1	1			5	5	Amber Glass	8 oz	--	14/40 days
			2-Methylnaphthalene and Dibenzofuran	8270C	1	1			5	5	Amber Glass	8 oz	--	14/40 days
			Total Arsenic and Lead	6020A/7471A	1	1			5	5	Plastic	8 oz	--	6 months
			PCBs	8081	1	1			5	5	Amber Glass	8 oz	--	14/40 days
Soil Waste Characterization														
Soil Waste Characterization	Composite	1	Protocol B (verify with receiving facility)	Various	--	--	--	--	1	1	Glass Jar	32 oz	--	varies
Groundwater														
Groundwater - Wells **ComEd Parcels & Off-Site**	Each well will be sampled once	(up to 5 monitoring wells) 5	PVOCs[6] and Styrene	8260B	1	1	--	VOC trip blanks will accompany each cooler containing VOC samples.	6	6	Glass Vial	Three 40 mL	HCl to pH<2, Zero Headspace	14 days
			PAHs[5]	8270 SIM	1	1			6	6	Amber Glass	1 L	--	7/40 days
			2-Methylnaphthalene, Dibenzofuran and Phenol	8270C	1	1			6	6	Amber Glass	1 L	--	7/40 days
			Total Antimony, Arsenic, Lead	6020 or 7470A	1	1			6	6	Plastic	500 ml	HNO3 to pH <2	6 months
			Available Cyanide	OIA-1677	1	1			6	6	Amber Plastic	500 ml	PbCO3; NaOH to pH>12	14 days
			GW Field Parameters[8]	Field	--	--			--	--	Field Measured	--	--	--
Water Waste Characterization														
Water Waste Characterization	Composite	1	Code B - CID Bio	Various	--	--	--		1	1	Glass Jar	32 oz	--	varies
Soil Gas, Indoor Air, and Ambient Air														
Soil Gas **Sanitary Sewer/South of West Hobbie Street**	1 sample per location	(5 soil gas probes) 5	PVOCs[6]	TO-15	1	--	--	--	6	6	Summa Canister	<1 L[7]	--	30 days
			Site-Specific VOCs[4]		1	--	--	--	6					
			Naphthalene		1	--	--	--	6					
Soil Gas **ComEd Parcels**	1 sample per location (Oil Pump House #1 & #2)	(2 soil gas probes) 2	PVOCs[6]	TO-15	--	--	--	--	2	2	Summa Canister	<1 L[7]	--	30 days
			Site-Specific VOCs[4]		--	--	--	--	2					
			Naphthalene		--	--	--	--	2					
Indoor Air **ComEd Parcels**	1 sample per location (Control Building)	1	PVOCs[6]	TO-15	--	--	--	--	1	1	Summa Canister	<1 L[7]	--	30 days
			Site-Specific VOCs[4]		--	--	--	--	1					
			Naphthalene		--	--	--	--	1					
Outdoor Ambient Air **ComEd Parcels**	1 sample per location	1	PVOCs[6]	TO-15	--	--	--	--	1	1	Summa Canister	<1 L[7]	--	30 days
			Site-Specific VOCs[4]		--	--	--	--	1					
			Naphthalene		--	--	--	--	1					

Notes:
1. Proposed number of samples do not include additional samples that may be collected if MGP residuals are present or contingency investigation locations.
2. Field duplicates will be collected at a frequency of 1 per 20 or fewer investigative samples. One soil gas/air field duplicate is proposed for the sampling event.
3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples will be collected at a frequency of 1 per group of 20 or fewer investigative samples. Additional volume will be determined by laboratory requirements.
4. North Station Site-Specific Volatile Organic COPC list for Vapor Intrusion includes: 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 2-Hexanone, 4-Methyl-2-pentanone, Acetone, Bromodichloromethane, Bromomethane, Carbon disulfide, Chloroethane, Chloroform, Chloromethane, Methyl ethyl ketone, Methylene chloride and Styrene.
5. PAHs include these 17: naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, chrysene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, and 2-methylnaphthalene.
6. PVOCs include benzene, ethylbenzene, toluene, xylenes (total), 1,3,5-trimehtylbenzene, and 1,2,4-trimethylbenzene.
7. One liter summa canister will be used unless otherwise specified by laboratory to meet detection limit requirements.
8. Field parameters for groundwater include temperature, pH, specific conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity.

COPC - constituent of potential concern
MGP - manufactured gas plant
PAH - polycyclic aromatic hydrocarbon
PID - photoionization detector
PVOC - petroleum volatile organic compound
VOC - volatile organic compound

Figures

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

OLD TOWN VILLAGE WEST CONDOMINIUMS

PGL/OLD TOWN VILLAGE WEST PARCELS

N FRONTIER AVE

W ELM ST

N CROSBY ST

W DIVISION ST

N KINGSBURY ST

N HALSTED ST

W HOBBIE ST

NOS-MWW103

NOS-MWW104

NOS-MWW105

NOS-MWW102

NOS-MWW101

NOS-MWW114

NOS-MWW116

NOS-MWW106

NOS-MWW115

NOS-MWW108

NOS-MWW109

NOS-MWW111

NOS-MWWKN

NOS-MWWKS

MW-1

NOS-IA01

CONTROL BUILDING

NOS-SB107

NOS-SB108

NOS-SB109

NOS-SB110

NOS-SB111

NOS-SB112

NOS-SB113

NOS-SB114

NOS-SB115

NOS-SB116

NOS-SB117

NOS-SG14

NOS-SG15

NOS-SG16

NOS-SG19

NOS-SG20

NOS-SG21

NOS-SG22

PUMP HOUSE #1

PUMP HOUSE #2

MAINTENANCE BUILDING

MWRD DEEP TUNNEL STRUCTURE

CITY OF CHICAGO SEWER

SEWER

SEWER

CONTAINMENT WALL

HISTORICAL COAL PILE

COMED PARCELS

HALSTED PARCELS

LASALLE CHESTNUT PARCELS

DIVISION PARCEL

DIVISION HALSTED LLC PARCEL

COMED TUNNEL

NORTH BRANCH CANAL

N

0 45 90

SCALE IN FEET

- PROPOSED VERTICAL DELINEATION SOIL BORINGS
- PROPOSED LATERAL DELINEATION SOIL BORINGS
- APPROXIMATE PROPOSED LOCATION FOR SUBSLAB SOIL GAS PROBE INSTALLATION AND SAMPLING
- APPROXIMATE PROPOSED INDOOR AIR SAMPLING LOCATION
- PROPOSED SOIL GAS PROBE
- EXISTING SOIL GAS PROBE TO SAMPLE
- EXISTING MONITORING WELL FOR PROPOSED GAUGING, SAMPLING (NOS-MWW114 & NOS-MWW15), AND SLUG TESTING
- EXISTING MONITORING WELL FOR PROPOSED GAUGING ONLY
- EXISTING MONITORING WELL LOCATION
- APPROXIMATE LOCATION OF HISTORIC MONITORING WELL FOR INSPECTION AND NAPL MEASUREMENT
- HISTORIC SOIL BORING LOCATION
- HISTORIC BORING NOT DELINEATED LATERALLY
- HISTORIC BORING NOT DELINEATED VERTICALLY
- COMED PARCEL BUILDINGS
- CONTAINMENT WALL
- HISTORICAL SITE FEATURE
- PARCEL BOUNDARY
- APPROXIMATE BOUNDARY OF OPERABLE UNIT 1

NOTES:
1) ACTUAL PROPOSED INDOOR AIR AND SOIL GAS SAMPLING LOCATIONS TO BE DETERMINED BASED ON FIELD RECONNAISSANCE
2) AMBIENT AIR SAMPLE NOS-AMB01 WILL BE COLLECTED UPWIND OF THE CONTROL BUILDING DURING COLLECTION OF NOS-IA01

DRAWN BY/DATE: SDS 9/26/18
REVIEWED BY/DATE: PFK 9/26/18
APPROVED BY/DATE: PFK 9/26/18

PROPOSED INVESTIGATION LOCATIONS

SSWP ADDENDUM 1, REVISION 2
NORTH STATION OPERABLE UNIT 1
CHICAGO, ILLINOIS

PROJECT NO: 67862

FIGURE NO: 1

Y:\GIS\Projects\202034\MXD\SSWP\Addendum01\Figure 1_Proposed Investigation Locations_180926.mxd Author: stolzsd Date/Time: 9/26/2018, 1:18:18 PM

Attachments

(Provided Separately)